



JPCOE

Chronicle

"Reach for the Stars"



Monthly Newsletter
September '19
Volume-VIII , Issue-III

*"when we think we learn
we Cease to know"*



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HOLY FATHER'S MESSAGE



Dear Brothers and Sisters,

“Let this be my greeting at the beginning of the New Year: “Peace is to this house!” In sending his disciples forth on mission, Jesus told them: “Whatever house you enter, first say, ‘Peace is to this house!’ And if a son of peace is there, your peace shall rest upon him; but if not, it shall return to you” (*Lk 10:5-6*).

Bringing peace is central to the mission of Christ’s disciples. That peace is offered to all those men and women who long for peace amid the tragedies and violence that mark human history. The “house” of which Jesus speaks is every family, community, country and continent, in all their diversity and history. It is first and foremost each individual person, without distinction or discrimination. But it is also our “common home”: the world in which God has placed us and which we are called to care for and cultivate “.

+POPE FRANCIS

COLLEGE LEVEL EVENTS

On behalf of NSS Thamirabarani River cleaning process was conducted on **SEP 14-2019** at Pavanasam. The first year students engaged with four faculties for this camp.



NSS Camp at Thamirabarani River

- Placement cell has organized an On-campus interview for ECE, EEE, CSE and MECH Students on 20.09.19. Interview was conducted by the HR, Syrma Tech, Chennai and 16 Students from CSE, 9 Students from EEE, 11 Students from ECE and one Student from MECH were selected.



Campus Drive by Syrma Tech, Chennai

- NBA Accreditation meeting was conducted at conference hall everyday at 4.30pm to 6.00pm. HOD & staff members presented the criteria to be followed in NBA accreditation. Principal Dr.M.Rajkumar explained the importance of NBA accreditation to the staff members.

- Onam Festival was organized at our college on **SEP 05-2019**. Rangoli Competition and Cultural events were organized for the students. Rev.Sr.Pradeeba, Administrator, Dr.M.Rajkumar, Principal, Rev.Sr.Gnanakannu, Campus superior were organized the events.



Onam Festival – Kerala student's group photo

- Women Awareness Program was organized for the girl's students at college auditorium on **SEP06-2019**. The program was organized by Mrs.Valli, Mrs.Saraswathi, Mrs.Rajammal, Mrs.Thangamari, One Shop Centre, Social Women's Welfare Department, Tirunelveli.



Women Awareness Program- Social Women's Welfare Department

- Motivational session was organized for all the second year students. Principal Dr.M.Rajkumar has handled the session on **SEP 21- 2019**.



Motivation class - Second Year Students

- Placement cell has organized Aptitude Training Program for all the final year students on **AUG 29-2019** to **AUG 31-2019**. From the class the students learnt about the shortcuts of Quantitative aptitude and Reasoning.



Aptitude classes by Resource Person

Civil Engineering

- Final year students M.Arunachalam and R.Sakthivel, and second year students Kamalesh, Sathiyaseran, Robin, Sujitha, Mariselvi, Amalorpa Jerina, Noorul Salma, Prishillal, S.Priya, Indralakshmi were participated National Level Technical Symposium held at “VV College of Engineering” on **SEP 12-2019**.
- R.Sakthivel won the second prize in the poster presentation and M.Arunachalam and S.Priya won the second prize in the event of Model Making.



Extra curricular Activity – CIVIL

- Civil department has organized “ENGINEER’S DAY CELEBRATION” to the department students at our College auditorium on **SEP 14-2019**. The chief guest of this event is Er. G.Vinayagamoorthi BE.,MSc, State Joint Secretary – FACEAT&P and the Guest of Honor is Er. N.Mohammed Sajith BE, MBA, Managing Director- Tenkasi Construction Company.



Engineer's Day Celebration – CIVIL

- The Autocad software training program was conducted by “CADD CENTER” to civil department students at our College auditorium on **SEP 14-2019**.



Software Training Program – CIVIL

Computer Science Engineering

- Third year student Mr.N.Mohamed Basheer has attended a “E-LEADERSHIP WORKSHOP” at Anna University Regional Campus, Tirunelveli on **AUG 30, 31-2019**.



EDA Workshop at Regional Campus-Tirunelveli

- CSE Department has organized the STARWAR Phase – I of CSI Students chapter on **AUG 28-2019**. The Chief Guest for this event is Mr. Tony Walter James, Manager, Avni Softcell, Tirunelveli. The Principal Dr. M. Rajkumar gave a presidential address, Ms. Bhavani final year CSE Students welcome the Chief Guest and the program was co-ordinated by Mr. L. P. A. Princely, AP/CSE.



Opening Ceremony of STARWAR Phase I



Honoring Chief Guest



Query Session



Team Leaders of STARWAR

- CSE department organized Industrial Visit for Second Year students at Mofiree Technology, Nagercoil on **SEP 09, 2019**. Students visited Mofiree Technology and learned about SQL and Oracle database development services. Students also visited Kanyakumari as a part of refreshment.



Industrial Visit at Mofiree Technology, Nagercoil

- CSE department organized Industrial Visit for Third Year students to visit Mofiree Technology,Nagecoil on **SEP 06, 2019**. Students visited Mofiree Technology and learned about SQL and Oracle database development services. Students also visited Kanyakumari as a part of refreshment.



Industrial Visit-III CSE

CO CURRICULAR ACTIVITIES

- Final year student Mr.R.Rajakuamar has won second prize in Photography events in National Level Technical Symposium conducted at National Engineering College, Kovilpatti on **SEP 12,13, 2019**.
- Second year students Mr.Ponsiva and Mr.Sakthivel has attended one day workshop on “TENSORFLOW” held at RAMCO Institute of Technology on **AUG 31, 2019**.



Workshop at RAMCO College

- Totally 9 students of Second and Third year students has attended One day workshop on “ANGULAR JS” held at National Engineering College,Kovilpatti on **SEP 12,13, 2019**.
- Final year student Mr.R.Rajkuamar has got First Prize in Video Editing Events held at SCAD College of Engineering,Thirunelveli on **SEP 06,2019**.
- Final year students Ms.Swethalaxmi, Ms.Muthulakshmi@Gowsalya presented a paper on “3D Internet” and got Second Prize in Paper Presentation Events held at SCAD College of Engineering,Thirunelveli on **SEP 06,2019**.

- Second year students Ms.Sumathi has won Second Prize in Circuit Debugging Events held at SCAD College of Engineering,Thirunelveli on **SEP 06,2019**.
- Second year students Ms.Velammal has won Second Prize in Circuit Debugging Events in National Level Technical Symposium held at SCAD College of Engineering,Thirunelveli on **SEP 06,2019**.



Appreciation of students Participated at various college

Electronics and Communication Engineering

- Electronics and Communication Engineering department organized the Eighth National Level Technical Symposium Telenix '19 on 12.09.2019 at college Auditorium. The Chief Guest of this event is Mr. S.Vijay Krishnan, Senior Sub Divisional Engineer, and BSNL Tirunelveli.



Symposium-TELENIX'19

- From **AUG 30 2019** onwards the IETE course has been organized for all third and final year students. This course is being for Mobile Phone Services.The program will be conduct on every Saturday.



- Third year ECE student S.Mohamed Meeran Subair has attended a “E-LEADERSHIP WORKSHOP” at Anna University Regional Campus, Tirunelveli on **AUG 30, 31-2019**.



Student Attend the EDA Program

- Mr.Sivaganapathy, AP/ECE was attend the Entrepreneurship development program organized by “NEC Business Incubator and KR innovation center” on 22.09.2019 at National Engineering College , Kovilpatti.



EDA Program at NEC, Kovilpatti

CO-CURRICULAR ACTIVITIES

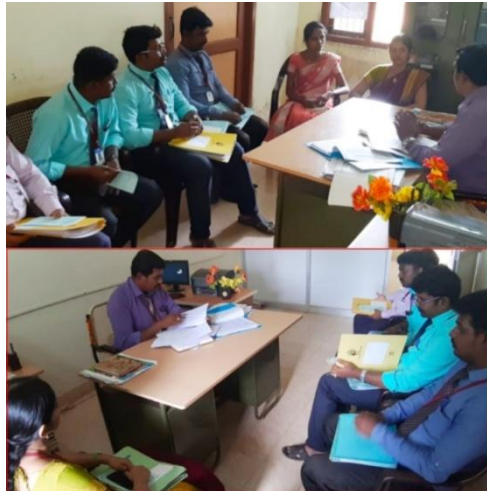
The following II Year students Mohamed Thameem Anzari, Arikaran, Krishnasamy, Raja Abishek, Sheik Adam, Ranjitha Bharvathi attended a workshop on Future intelligent of sensor in “TECHYUGA 19” at RAMCO Institute of Technology, Rajapalayam on **SEP 30-2019**.



II Year students Brindha, Abinaya, Gnana Prisklla, Fathima Beevi, Lisha, Mari Selvi had Presented a paper in National Level Technical Symposium “TECHYUGA 19” at RAMCO Institute of Technology, Rajapalayam on **SEP 30-2019**.

Electrical and Electronics Engineering

- Department strategy planning was carried out at EEE HOD cabin on 24.08.2019. Mr. T. Manoj kumar HOD/EEE discussed the strategies to improve the department result.



HOD discussing strategies to improve result

- Department of Electrical & Electronics organized “Incubation Hub” at college auditorium on 29.08.2019. The main objective of the Hub is to improve employment opportunities in electrical field and to conduct placement and entrepreneurship training programs.
- Mr. P. Judwin, Director of Vigor Solar energy private limited, Chennai signed MoU with EEE department. Mr. P. Shiva Venkatesh, Head operations Pycida Consultancy private limited, Chennai address the students about the Incubation hub.



Vigor solar energy private limited signed MoU with EEE department

- EEE department celebrated national sports day on 29.08.2019.



Students playing Carrom



Students playing Football

- EEE department renovated IEI Student's Induction club at college auditorium 04.09.2019. Chief guest Mr. Rajamani, senior member of IEI Chamber explained the importance of IEI student's chapter to the students.



Chief guest Mr. Rajamani addressing the students

- Quiz competition was conducted at EEE department on 05.09.2019. In Pupil's Space of the notice board, we will be displaying some quiz daily and the next day students from any department can explain the solution for it. The winners will be rewarded by our HOD.



Student's explaining the solution to our HOD



HOD honouring the winners

- Resume competition was conducted for final year students on 06.09.2019. Chief guest Mr. Francis Dasnic Placement Officer of JP College of Engineering selected the best resume among 28 resumes in front of the student's placement coordinators Mr. Lourdhu Austin & Ms. Mukila of final year EEE. Ms. Mariselvi of final year EEE was selected as winner.



Honoring Best Resume Winner

- EEE department arranged one day guest lecture for third year students on **SEP 09-2019**. Mr. E.A. Mohammed Ali, HOD/ECE from National College of Engineering has given lecture on the topic "Digital Signal Processing".



Guest lecture by Mr. Mohammed Ali-NEC, Kovilpatti

CO CURRICULAR ACTIVITIES

- Second year students Mr.Chandrasekar & Mr.Abdullah were presented a paper on “Controller for Charging Electrical Vehicles at Workplaces using Solar Energy” at SCAD College of Engineering,Thirunelveli on **SEP 06-2019**.
- Second year students Mr.Nichael Maria Dass & Mr.Mohammed Irfan Masood were presented a paper on “Embedded Based Notification and Security alert for Fishermen” at SCAD College of Engineering,Thirunelveli on **SEP 06-2019**.
- Ms.Savithiri of III EEE & Ms.Hamitha Banu of II EEE got second prize for presenting paper on “Comparison of Natural Ester and Synthetic Ester as Transformer oil replacement” at RAMCO Institute of Technology,Rajapalayam on **AUG 31-2019**.
- Third year students presenting paper at RAMCO College of EngineeringThird year students Ms.D.Arjilin & Ms.M.Gowsalya were presented a paper on “Neural Network Based on Prediction of Contamination level in Coastal region Insulators” at RAMCO Institute of Technology,Rajapalayam on **AUG 31-2019**.
- Second year students Mr.R.Elavarasn & Mr.B.Ranjith were presented a paper on “Unmanned Restroom Cleaning Surveillance System” at SCAD College of Engineering,Thirunelveli on **SEP 06-2019**.



Appreciation Moment- SCAD College of Engineering and Technology

Mechanical Engineering

- Mr.R.Siddharthan, AP & Head/Mechanical participated in the workshop on "Theory and practice of Sustainable Manufacturing" at National Institute of Technology, Tiruchirappalli from **SEP 20, 21-2019**.
- Awareness Program about the "Importance of English" has been conducted for final year students by Mr.Thirumalairajan ,AP/S&H on **SEP 09-2019**.



Awareness Program By Mr.Thirumalairajan

- Mechanical Engineering Department organised a special talk about "Siemens Centre of Excellence in Manufacturing". This laboratory is located in National Institute of Technology at Tiruchirappalli. Dr M.Duraiselvam, Professor, Department of Production Engineering from NIT Tiruchirappalli delivered this talk on **AUG 31-2019**. Around 50 students attended this program from various departments.



Guest Lecture on Excellence in Manufacturing

- III year students visited ISRO project expo which is organized by Francis Xavier College of Engineering, Tirunelveli on **SEP 07-2019**.



Project Expo at FXEC

- Third year and second year students attended the workshop on “Advancement in Automobile Engineering “ which was conducted by National Engineering College, KovilPatti on **SEP 12-2019**.



Workshop at NEC-Kovipatti

STUDENTS ARTICLES

BRIDGELESS BUCK-BOOST CONVERTER FOR POWER FACTOR CORRECTION OF BLDC MOTOR

A Bridgeless AC-DC rectifier (buck-boost converter) for power factor correction of BLDC motor drive is proposed. A PFC BL buck-boost converter is designed to operate in discontinuous inductor current mode (DICM) to provide an inherent PFC at ac mains. The DCM operation also includes the advantages of self power factor correction property. It achieve almost unity power factor. The absence of the input diode bridge and the presence of only two semiconductor switches in the current flowing path obviate the conduction losses. An approach of speed control of the BLDC motor by controlling the dc link voltage of the voltage source inverter (VSI) is used with a single voltage sensor. This facilitates the operation of VSI at fundamental frequency switching by using the electronic commutation of the BLDC motor which offers reduced switching losses. The motor is controlled in all the four quadrants without any loss of power; in fact energy is conserved during the regenerative period which can be utilized for charging battery and to supply the light loads. The performance of the proposed drive is simulated in MATLAB/Simulink environment, and the obtained results are validated experimentally on a developed prototype of the drive.

APPLICATIONS Industrial Applications,

By,

Kalpana, IV EEE

INTEGRATED CONVERTER TOPOLOGY

Renewable energy resources are gaining ever deeper penetration into the power Grid because of its advantages. Hybrid power sources are becoming more and more popular. Renewable energies have advantages of zero fuel cost and reduced environmental impacts. This project proposes an integrated converter topology for the hybrid power

sources. Two inputs, one from dc source and another from solar PV panel are given to the converter and maximum power is extracted by using maximum power point tracking method. Integrated converter is the combination of CUK and Single Ended Primary Inductor Converter (SEPIC) converter. The output is given to inverter which converts dc to ac and is applied to load. There is an enormous need for integrated power converters that are capable of interfacing and controlling several power terminals with low cost and compact structure. Integrated converter topology – (Integrating the two input sources with the help of CUK converter and Single Ended Primary Inductor Converter (SEPIC)). The integrated converter topology has reduced the circuit components and also increases the system efficiency.

APPLICATIONS:

1. Small scale industries
2. Grid connection
3. Home appliances

By,

Lourdhu Austin, IV EEE

MULTILEVEL INVERTER

A comparison of single phase nine-level and eleven-level inverter topology constitutes the level module and H-bridge inverter. Asymmetrical cascaded H-bridge inverter is used, where the magnitudes of dc voltage supplies are unequal. Fundamental frequency staircase modulation and Selective harmonic elimination technique is used to generate appropriate switching gate signals. The THD value for selective harmonic elimination technique is reduced when compared to staircase modulation technique. The configuration was obtained from reduced number of power electronic components. Therefore, the topology results in reduction of installation area cost and lowers total harmonic distortion.

The Selective Harmonic Elimination (SHE) technique is one of the low-switching frequency control technique which eliminates $(n - 1)$ lower order harmonic components, n being the number of switching angles.

APPLICATIONS:

- Electric vehicle drives
- DC power source utilization
- Interfacing with renewable energy resources.

By,

Melsiya, IV EEE

DESIGN OF FULL BRIDGE BUCK CONVERTER WITH A FLY BACK SNUBBER FOR HIGH POWER APPLICATIONS

This project deals with the design of a full bridge buck converter along with fly back snubber for high power applications. A fly back snubber is a combination of a diode, a capacitor and a fly back converter. A fly back snubber circuit is used to clamp the voltage spike originating from the current difference between the leakage inductance and current-fed inductor of the isolation transformer. The fly back snubber reduces the current passing at the current-fed side associated with the active switches. The full bridge buck converter along with a fly back snubber has been simulated using MATLAB software and is checked for feasibility with the simulated results of the conventional circuit without a fly back snubber. Pulse width modulation (PWM), or pulse-duration modulation (PDM), is a modulation technique used to encode a message into a pulsing signal. Although this modulation technique can be used to encode information for transmission, its main use is to allow the control of the power supplied to electrical devices.

APPLICATIONS

1. Fork lift
2. Food and beverage production

By,

Arjilin, III EEE

RENEWABLE ENERGY-SOLAR ENERGY


In this project, the reduction of energy-consumption in street-light structure is presented. An intelligent system that takes automatic decisions for luminous control (ON/OFF/DIMMING) considering surrounding light intensity is implemented. Passive infrared (PIR) sensor is used for the concerned project with a purpose of activation of led-street-light only when an object is passing through the subjected peripheral of street-light thereby saving energy. Maximum solar energy harvested from the sun through proper azimuth angle adjustment and stored in battery. This system also provides indication when vehicle stays for a long time in the road way to prevent accidents. It also describes the use of wireless sensor networks using GSM for streetlight fault monitoring. It is designed in the aspect of implementing in commercial basis. Using passive infrared sensor we can control the luminous power considering surrounding light intensity (so maximum amount of solar energy can be utilized) and also by using GSM we can monitoring the fault on it. The use of solar tracking system has greatly increased the system and has helped to increase its overall output. Whereas the use of charger circuit in the solar based LED Street light has not only helped in saving the battery power but also in preventing the battery from getting deep discharged.

APPLICATIONS

Providing lighting in industries, campuses and parking lots of huge shopping malls.

By,

Mathan, II EEE



WIRELESS TSUNAMI WARNING ALARM FOR PEOPLE SECURITY

An embedded system is a special-purpose computer system designed to perform a dedicated function. Unlike a general-purpose computer, such as a personal computer, an embedded system performs one or a few pre-defined tasks, usually with very specific requirements. Since the system is dedicated to specific tasks, design engineers can optimize it, reducing the size and cost of the product. Embedded system comprises of both hardware and software. Embedded system is fast growing technology in various fields like industrial automation, home appliances, automobiles, aeronautics etc., embedded technology uses PC or a controller to do the specified task and the programming is done using assembly language programming or embedded C. In this project “**Wireless Tsunami Warning Alarm for People Security**” which is used to manage a system for out tsunami intimation. In this project there is a control system which has a RF transmitter with RF receiver send it through controlling section. We placed three type of sensor 1) pressure sensor 2) water 3) vibration in each sensor give variation to micro controller. There is a receiver section with a voice announcement system. This receiver section receives the data from the control system and intimates the voice feedback.

By,

Fathima Reenu, II EEE



*Success is when
your "Signature"
Changes to
"Autograph"*

A.P.J. Abdul Kalam



*A good teacher teaches
from the heart.*

Happy Teacher's Day

