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GOKUL EPITOME

**GOKUL
GROUP OF INSTITUTIONS
BOBBILI**

BY
R.SRINIVAS RAO
ASST.PROFESSOR in EEE

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Mr.R.Srinivas Rao, M.Tech

Asst.Professor of Electrical & Electronics Engineering.
Gokul Institute of Technology and Sciences
Bobbili.

1. **Title of Paper:** **"Sensorless Variable-Speed Wind Energy System"** in *International Journal and magazine of engineering ,technolog, management and research,Vol. 3, and Issue 12, 2016 | December 2016, ISSN No: 2348-4845*

Abstract: Only when the turbine rotates at optimum speed can the maximum power be extracted from the wind. Therefore, the maximum power point (MPP) tracking (MPPT) technique is important for wind energy conversion systems. To achieve MPPT control, the generator speed measurement is needed in each moment. Using a rotor speed sensor for this purpose poses some obstacles to practical implementation and has an impact on drive's cost, machine size, reliability, and noise immunity. In this paper a cost-effective sensorless reduced switch count PMSG based wind energy system is proposed in which the generator speed is estimated by an observer method. Due to deterioration of fossil fuel and policies on greenhouse gas mitigation, wind energy systems (WESs) has gained traction as one of the most promising renewable energy systems for electric power generation during the past years. At a specific wind speed, the captured wind power by WES is a function of wind turbine speed. Simulation results are presented to verify the performance of the proposed wind energy system under steady state and transient conditions.

2. **Title of Paper:** **"Modeling and Simulation of SRF Control Based Shunt Active Power Filter and Application to BLDC Drive"** in *IJSRD - International Journal for Scientific Research & Development| Vol. 2, Issue 06, 2014 | ISSN (online): 2321-0613*

Abstract: With the widespread use of harmonic generating devices, the control of harmonic currents to maintain a high level of power quality is becoming increasingly important. An effective way for harmonic suppression is the harmonic compensation by using active power filter. This paper presents a comprehensive survey of active power filter (APF) control strategies put forward recently. It is aimed at providing a broad perspective on the status of APF control methods to researchers and application engineers dealing with harmonic suppression issues. Many control techniques have been designed, developed, and realized for active filters in recent years. This paper presents different types of Synchronous reference frame methods for real time generation of compensating current for harmonic mitigation and reactive power compensation. All the techniques are analyzed mathematically and simulation results are obtained which are being compared in terms of its compensation performance with different parameters under steady state condition. The three techniques analyzed are the Synchronous Reference Frame Theory (SRF), SRF theory without synchronizing circuit like phase lock loop (PLL) also called instantaneous current component theory and finally modified SRF theory. Simulation results are obtained under sinusoidal balanced voltage source balanced load condition. The comparison and effectiveness of all the methods is based on the theoretical analysis and simulation results obtained with MATLAB employing a three phase

three wire shunt active filter test system. Finally shunt active power filter is applied to BLDC drive application. THD plots with and without APF is presented.



**Mr. B. S. Suresh Kumar,
M.Tech, (Ph.D)**

Asst. Professor of Electrical & Electronics Engineering.
Gokul Institute of Technology and Sciences
Bobbili.

1. **Title of Paper:** “An Improved Control Strategy for Modular Multilevel Cascaded Inverters with Unbalanced DC Sources” in *International Journal of Scientific Engineering and Technology Research, IJSETR, Vol.05, Issue.14, JUNE-2016, ISSN 2319-8885, Pages: 2688-2693*

Abstract: This paper proposes the neutral voltage modulation strategy for pulse width modulation of multi level converter to achieve balanced line-to-line output voltages and to maximize the modulation index in the linear modulation range where the output voltage can be linearly adjusted in the multilevel cascaded inverter (MLCI) operating under unbalanced dc-link conditions. Here one by three model multi level multi level cascaded inverter is utilized for the evaluation of NVM method. In the proposed method, too large of a dc-link imbalance precludes the balancing of the output voltages. This limitation is also discussed. The simulation for a seven-level phase-shifted modulated MLCI for electric vehicle traction motor drive shows that the proposed method is able to balance line-to-line output voltages as well as to maximize the linear modulation range under the unbalanced dc link conditions. This paper gives the comparison

of proposed and conventional modulation methods in the case of unbalanced dc link voltages of MLCI.

2. **Title of Paper:** “Modeling And Simulation Of Dstatcom For Power Quality Enhancement In Distribution System” in *International Journal of Advance Research In Science And Engineering, IJARSE, Vol. No.4, Issue No.01, January 2015, ISSN-2319-8354(E)*

Abstract: Shunt compensation for medium voltage distribution systems requires higher rating for voltage source converters (VSCs). Ratings of the semiconductor devices in a VSC are always limited; therefore, for higher rated converters it is desirable to distribute the stress among the number of devices using multilevel topology. Cascaded multilevel configuration of the inverter has the advantage of its simplicity and modularity over the configurations of the diode clamped and flying capacitor multilevel inverters. Application of cascaded multilevel converters for shunt compensation of distribution systems has been described in Literature. This paper presents an investigation of five- Level Cascaded H – bridge (CHB) Inverter as Distribution Static Compensator (DSTATCOM) in Power System (PS) for compensation of reactive power and harmonics. The advantages of CHB inverter are low harmonic distortion, reduced number of switches and suppression of switching losses. A CHB Inverter is considered for shunt compensation of a 11 kV distribution system. Finally a level shift carrier PWM (LSCPWM) and phase shifted PWM (PSPWM) techniques are adopted to investigate the performance of CHB Inverter. The results are obtained through Matlab/Simulink software package. The proposed DSTATCOM is simulated for both linear and nonlinear loads.



**Mr.P.Pavan Kumar,
M.Tech**
Asst.Professor
Dept. of ECE
Gokul Institute of Technology
and Sciences

1. **Title of Paper:** "A Novel Arm Based accident Preventive System For Automobiles" in *International Journal of Intelligence Research, IJOIR, Volume 8, July - December 2016, (e) 0976-9859 (p) 0976-985x, pages : 73-77.*

Abstract: Present world is being controlled by technologies and now a day's so many useful technologies are coming out to make our life style more comfort, luxurious and secure. Especially in automobiles many technologies are being implemented to provide more safety for users. This project is best application for avoiding collisions in automobiles. Based on requirements of modern vehicle, in- vehicle Controller Area Network (CAN) architecture has been implemented. In order to reduce point to point wiring harness in vehicle automation, CAN is suggested as a means for data communication within the vehicle environment. The benefits of CAN bus based network over traditional point to point schemes will offer increased flexibility and expandability for future technology insertions. This paper describes system which uses sensors to measure various parameters of the car like speed, distance from the other car, presence of alcohol in car and accidental change of lane and sends a warning signal to the driver if any of the parameter goes out of range to avoid accidents. The aim of this project is to avoid collision by detecting obstacles, vehicles using obstacle

sensors (IR or Ultrasonic) and controlling the vehicle accordingly by using CAN protocol.

2. **Title of Paper:** "Arm Based Driver Assistance System for Vital Signal Monitoring" in *International Journal of Science and Engineering Research (IJSER), Volume 5, Issue 5, May 2017, 3221 5687, (P) 3221 568X.*

Abstract: This project is about making cars more intelligent and interactive which may notify or resist user under unacceptable conditions, they may provide critical information of real time situations to rescue or police or owner himself. The primary purpose of this paper Drowsy Driver Detector is to develop a system that can reduce the number of accidents from drowsy [2] driving. And the second application in this paper was to detect the alcohol detection and also to track the vehicle to find the culprit and in intimation to the Control Room with their location, and also the vehicle can be stopped. The third application of the project is to provide security to the vehicle. ECG [1] is used to detect the pulse of the driver. If the driver is in abnormal condition that is pulse rate of the person is high then the vehicle is stopped and the position of the vehicle is traced. If the warning feedback system is triggered, the micro controller makes a decision which alert needs to be activated. And send location using GPRS&GPS technology.

3. **Title of Paper:** "A LOW POWER VLSI DESIGN OF AN ALL DIGITAL PHASE LOCKED LOOP" in *International Journal of Science and Engineering Research (IJSER), Volume 5, Issue 4, April 2017, 3221 5687, (P) 3221 568X.*

Abstract: The design is synthesized in Xilinx ISE software. Phase locked loop is a familiar circuit for high frequency application and very short interlocking time. In this paper we have

implemented and analysed All Digital Phase locked loop (ADPLL), as the present applications requires a low cost, low power and high speed Phase locked loops. This work Implements an ADPLL with Nyquist rate phase detector which is basically a digital multiplier, simulation results proves a very high speed of operation for low frequency ranges and resource utilization on FPGA proves the structure simpler.



Mr.CH. VINODH KUMAR,
M.Tech

Asst.Professor

Dept. of CIVIL

Gokul Institute of Technology
and Sciences

1. **Title of Paper:** “**HIGH STRENGTH CONCRETE**” in **INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & RESEARCH TECHNOLOGY**, ISSN: 2277-9655, Impact Factor: 4.116, CODEN: IJESS7

Abstract: Concrete has been since a long time a major material for providing a stable and reliable infrastructure .Concrete with compressive strengths of 20-40N/mm² have been traditionally used in construction projects. With the demand for more sophisticated structural forms along with deterioration, long term poor performance of a conventional concrete led to accelerated research for development of concrete which would score on all the aspects that a new material is evaluated upon i.e. workability, durability, affordability and thus enable the construction of sustainable and economic buildings with an extra ordinary slim designs besides providing material that will have long term better performance and reduced maintenance. The development of High Strength

Concrete has been a great breakthrough in Concrete Technology. High strength concrete (HSC) may be defined as concrete with a specified characteristic cube strength between 40 and 100 N/mm², although higher strengths have been achieved and used. Strength levels of 80 to 100 N/mm² and even higher are being used for both precast and in-situ works. High Strength Concrete is specified where reduced weight is important or where architectural considerations require smaller load carrying elements. The use of high strength concrete offers numerous advantages in the sustainable and economical design of structures.

2. **Title of Paper:** “**Effect of Direct Marine Exposure on Strength of Blended Concretes**” in **IJSRD - International Journal for Scientific Research & Development** | Vol. 4, Issue 10, 2016 | ISSN (online): 2321-0613

Abstract: Tons of water is annually used as mixing, curing and cleaning around the world, in concrete industry. As there is a scarcity of fresh drinkable water around the world; so there is a need to save fresh water and hence possibilities of using seawater as mixing as well as curing water should be investigated seriously. The experimental investigation was carried out to study the strength performance of ordinary Portland cement (OPC) concrete, Fly ash concrete and GGBS concrete using both potable water and marine water. Hardened concrete was tested for compressive strength to ascertain the feasibility of blended concretes when concrete is subjected to marine environment. Accordingly, Compressive strength of concrete test at the age of 56 days was tested for M50 grades of Normal, Fly ash and GGBS concrete. It was concluded from this study that Sea water can be used for concrete compression members.

3. **Title of Paper:** "INFLUENCE OF WASTE MATERIALS ON LOCALLY AVAILABLE SOILS" in *International Journal & Magazine of Engineering, Technology, Management and Research*, ISSN No: 2348-4845, Volume No: 6 (2016), Issue No: 09 (December)

Abstract: Landfills play a significant role in the waste management practice. These are the systems designed and constructed to contain discarded waste so as to minimize release of contaminants to the environment. Ground pollution arises from the impact of past and current industrial activity and due to improper disposal of waste generated by society. One of the major sources of soil pollution is discharge of industrial waste into soil through leakages from waste containment facilities and due to various industrial operations. Exceeding the contamination levels in the unlined disposal ponds such as landfills, causes a serious threat to the ground water contamination as well as health. Lining system in the landfill plays a key role in forming a barrier between the waste and soil environment. In order to minimize the severity of the contamination with in the economical constraints barrier layers are traditionally constructed using locally available clayey soils. Design of secured land disposal facility includes, minimizing the transport of contaminants through the liner. The increased concentrations of harmful contaminants due to the indiscriminate industrial activities are of primary concern to the modern civilization. The leachate contains four groups of pollutants: dissolved organic matter, inorganic macrocomponents, heavy metals, and xenobiotic organic compounds. The release of leachate to the environment is one of the major environmental impacts related to disposal of waste. In order to minimize the severity of the

contamination, solid substrates are commonly used as sorbents to attenuate heavy metals present in the industrial effluent. However, the attenuation or retention capacity of the sorbent depends on the sorption capacity, which in turn depends on the physico-chemical- mineralogical characteristics of the sorbent. Sorption and hydraulic characteristics of the geomaterials play a predominant role in mitigating the transport of the contaminants through the liner system. The liner material should maintain its strength, hydraulic conductivity and sorption behavior over prolonged interaction with the chemically aggressive industrial effluents. In the present paper, an attempt has been made to study the retention capacity of the heavy metals like Nickel (Ni) and Cadmium (Cd) by locally available soils in Warangal. Ni and Cd are the byproducts in the fertilizer plants and battery industries. The rate of ground water contamination in the unlined landfills, mainly depends on the adsorption capacity. This adsorption capacity mainly depends on the cation exchange capacity and pH conditions which are developed with in the landfill. In the present work an attempt is made to study the heavy metal adsorption capacity of locally available soils such as red earth (CI), black cotton soil (CH) and municipal dumping yard soil (SC). Suitability of above mentioned locally available soils as a liner material can be evaluated based on the heavy metal sorption capacity. A series of batch sorption experiments (at liquid to solid ratio of 4) were conducted at different pH values of 2, 4, 6, 8 and 10 as the leachate in a landfill changes from acidic to basic phase over its life time. Precipitation mechanism is quite dominant at higher pH values, whereas Cation Exchange Capacity is significant at low pH conditions. Based on the above test results it is found that values of q_e (amount of metal ion adsorbed per gram of soil) and R% (percentage removal) are observed to be increasing with increase in pH value of solution. Among the three

soils, SC soil is giving better results compared to other types of soils and can be used as landfill liner material.



**Mr.P.L.Pradhan, HOD
M.Tech, (ph.d)**
Assoc.professor
Dept. of CSE
Gokul Institute of Technology
and Sciences

1. **Title of paper: "Dynamic SFK Model Optimizing the Risk on Operating System"** (Single-Author PL Pradhan) in *IJCST7.1, ISSN: 0976-8491, Jan-Mar 2016.*

Abstract: Now-a-days, increasing the importance of business and resources over a complex RTS and growing the external risks is a very common phenomenon. The system risks put forward to the senior management focus on complex risk on RTS. The senior management has to decide whether to accept expected losses or to implement into security mechanisms in order to minimize the down time of risk on complex infrastructure. This paper contributes to the development of an optimization model that aims to determine the optimal cost to be invested into UFS mechanisms that, the allocation& distribution of measure components on operating system and relevant resources (i.e. Shell, File and Kernel). Our SFK pattern should be design in such way; the file systems, shell and kernel automatically protected, detected & corrected all the time. We have to reduce the system risk by implementing SFK pattern based on semi-group structure, mean while improving the highest access control on the File, Memory and Processor & Kernel system. Finally, we have to maximize the performance, reliability, and

fault Tolerance& minimize the cost, time of the RTOS over a complex web application. Our objective is that fix up the risk at optimal level with minimal cost and time.



CH, DAMODAR NAIDU
ASST.PROFESSOR
DEPT.OF CIVIL
GOKUL INSTITUTE OF
TECHNOLOGY AND SCIENCES

1. **Title Of The Paper: "EXPERIMENTAL STUDY ON COMPRESSIVE AND FLEXURAL STRENGTH OF USING FIBRE REINFORCEMENT & METAKAOLIN AS PARTIAL REPLACEMENT OF CEMENT"** in *International Journal & Magazine of Engineering, Technology, Management and Research, Volume No: 3 (2016), Issue No: 10 (November).*

Abstract: Concrete is probably the most extensively used construction material in the world. The main ingredient in the conventional concrete is Portland cement. The amount of cement production emits approximately equal amount of carbon dioxide into the atmosphere. Cement production is consuming significant amount of natural resources. That has brought pressures to reduce cement consumption by the use of supplementary materials. Availability of mineral admixtures marked opening of a new era for designing concrete mix of higher and higher strength. GROUND GRANULATED BLAST FURNACE SLAG (GGBS) is a new mineral admixture, whose potential is not fully utilized. Moreover only limited studies have been carried out in India on the use of slag for the development of high strength concrete with addition of steel fibers. The study focuses on the flexural strength performance of the blended concrete containing 20% percentage of GGBS and different %s of steel fibers as a partial

replacement of OPC. The cement in concrete is replaced accordingly with the percentage of 20% by weight of GGBS and 1%, 2%, 3% by weight of steel fiber. Concrete Samples are tested at the age of 7 and 28 days of curing. Finally, the strength performance of slag blended fiber reinforced concrete is compared with the performance of control mix. From the experimental investigations, it has been observed that, the optimum replacement of 20% of Ground Granulated Blast Furnace Slag to cement and steel fiber of 2% with respect to the weight of cement showed improved better results in flexural strength and proved to be optimum proportion when compared with other proportions with respect to strength and economy

**M SURYA RAO**

Asst.professor
Dept. of EEE
Gokul Institute of
Technology and Sciences

- Title of paper: "VOLTAGE ANALYSIS AND BALANCING CONTROL OF DISTRIBUTION NETWORK USING MODERN MULTILEVEL CONTROLLER**
"in International Journal of Multidisciplinary Educational Research, Volume: 6, Issue: 5(3), May, 2017

Abstract: A measured multilevel converter control frame, based on converter vitality stockpiling is proposed in this paper for two distinctive control modes: dynamic power and dc voltage. The proposed control framework decouples the sub-module (SM) Capacitor voltage from the dc transport voltage. one of the reasonable application is administration of dynamic repetitive SMs. A handy hvdc framework

with 401-level MMCs, incorporating 10 % repetition in MMC SMs, is utilized for approving and exhibiting the upsides of the proposed control framework. This paper likewise displays novel capacitor voltage adjusting in light of capacities. It is utilized radically to diminish the quantity of switching s for every SM and improve the computation productivity.

**SRINIVAS RAO**

Asst.professor
Dept. of MBA
Gokul Institute of
Technology and Sciences

- Title: ANDHRA PRADESH BIFURCATION**

Abstract: The Andhra Pradesh bifurcation will have significant implications on resource flow to the two new States – Telangana and new Andhra Pradesh – and on their economic development. In the long run, both of the regions are likely to benefit, but both of them will face considerable uncertainty in the immediate future. Hyderabad will be the common capital of new Andhra Pradesh and Telangana for an initial period of 10 years, after which it will be the capital of Telangana. The special position of Hyderabad gives rise to considerable complications in working out both revenues and fiscal transfers for both of the new states. Being the center of economic activities and a source of Government finance, it will critically define the fiscal prospects of the two states. The bifurcation will impact a wide range of relevant aspects, including the division of assets and liabilities, water resources, land resources, and the division of pensioners and existing government employees and public sector enterprises.

2. Title: DEMONETIZATION

Abstract: The Government of India announced that the Rs 500 and Rs. 1000 denominated currency notes will cease to be legal tender. The move was targeted towards tackling black money, corruption and terrorism. After initial euphoria, questions began to emerge. What are the costs of this demonetization? Will it be effective if people can still create new black money thereafter? Will it increase the GDP? Will it increase inflation? What about tax revenues? We look for answers. The currency was demonetized first time in 1946 and second time in 1978. On Nov. 2016 the currency is demonetized third time by the present Modi government. This is the bold step taken by the govt. for the betterment of the economy and country. In this paper I want to discuss the impact of recent demonetization on the Indian system

3. Title: DIGITAL INDIA AND ITS IMPACT

Abstract: It is a well-known fact that digital India is the outcome of many innovations and technological advancements. These transform the lives of people in many ways and will empower the society in a better manner. The 'Digital India' programmes, an initiative of honorable Prime Minister Mr. Narendra Modi, will emerge new progressions in every sector and generates innovative endeavors for geNext. The motive behind the concept is to build participative, transparent and responsive system. The Digital India drive is a dream project of the Indian Government to remodel India into a knowledgeable economy and digitally empowered society, with good governance for citizens by bringing synchronization and co-ordination in public

accountability, digitally connecting and delivering the government programs and services to mobilize the capability of information technology across government departments. Today, every nation wants to be fully digitalized and this programme strives to provide equal benefit to the user and service provider. Hence, an attempt has been made in this paper to understand Digital India – as a campaign where technologies and connectivity will come together to make an impact on all aspects of governance and improve the quality of life of citizens.

4. Title: BLACK MONEY IN INDIA: CURRENT STATUS AND IMPACT ON ECONOMY

Abstract: In the present era, issue of BLACK MONEY has come into forefront of the society with active participation of our youth and parliament. In the context of current status it includes sources from where black money is generated and its uses in the country at different levels. This paper represents the framework, policy options and strategies that Indian government should adopt to tackle with this issue and also describes the Impact on economy in this context. It also studies the one of the main reason behind the generation of black money i.e. corruption. It shows up to what extent, the corruption leads to its generation which has considerable impact on various sections of the society. At last but not least, conclusion of this paper is provided representing the ongoing issue of black money in our country and its future course of action. To control the generation of black money there should be a strong and appropriate legislative framework. The present paper helps to know about present status of black money in INDIA & its Impact on economy

SARASWATHI POOJA WAS CONDUCTED BY FIRST YEAR STUDENTS ON 17-08-2017

SARASWATHI POOJA WAS CONDUCTED BY FIRST YEAR STUDENTS ON 17-08-2017



INDEPENDENCE DAY CELEBRATIONS AT GOKUL
GROUP OF INSTITUTIONS BOBBILI ON 15-08-2017



INDEPENDENCE DAY CELEBRATIONS AT GOKUL
GROUP OF INSTITUTIONS BOBBILI ON 15-08-2017



CONDUCTING QUIZ IN EEE DEPARTMENT ON
19-08-2017



YOGA CLASS CONDUCTED IN SEMINAR HALL ON
19-08-2017 BY PHADY SIR



MEDICAL CAMP CONDUCTED ON 31-08-2017 AT
BALIJIPETA MANDALAM



MEDICAL CAMP CONDUCTED ON 31-08-2017 AT
BALIJIPETA MANDALAM.

MEDICAL CAMP CONDUCTED ON 31-08-2017 AT
BALIJIPETA MANDALAM



**SEMINAR ORGANISED BY AGRICULTURE
AND MBA DEPARTMENT ON 27-08-2017**

**SEMINAR CONDUCTED BY PHARMACY
DEPARTMENT ON 31-08-2017**



**INDUSTRIAL TOUR TO J.K.PAPERS LTD,
RAYAGADA BY DIPLOMA STUDENTS OF
GOKUL GROUP OF INSTITUTIONS ON
29-08-2017**

**DR.B.VENKAT RAO MBA RECEIVED HIS PH.D
DEGREE FROM ANDHRA UNIVERSITY, VICE
CHANCELLOR PROF.G.NAGESWAR RAO ON 83 &
84 TH CONVOCAATION AT VISAKHAPATNAM ON
29-07-2017**

