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Dr. Parul Mishra  
Assistant Professor, Department of English, GD Goenka University Gurugram, Gurgaon (Haryana), India.
**Abstract:** In the present scenario the economy of a structure is depending upon the type of construction of substructure. The load coming from the superstructure is not adequately bear by the soil, it should be strengthened enough by any of soil modification techniques (soil stabilization). In India expansive soil deposits are one of the prime soil deposits in India. The functioning of expansive soils is mainly depends on the existence of Montmorillonite clay mineral, which has an expansive matrix. These types of soil can exhibit high bulging and compressing aspects and have less strength. The problems associated with expansive soil could be revamp by using the admixtures like lime, cement, fly ash, stone dust, quarry dust, rice husk ash etc. So, expansive soils are treated with addition of admixtures is one of the effective soil stabilization methods to strengthen the expansive soils. Numerous researches, all over the earth, are working to develop effective and feasible treatment methods to reduce the problems posed to the construction of paved and unpaved roadson expansive soil subgrade.In this present work laboratory tests were carry out to examine the effectiveness of dissimilar additives are Fly Ash, Metakaolin, Fly Ash + Metakaolin Combinations, in modifying the expansive soil sub grade properties, thereby improving the strength and reducing the swelling and shrinking phenomenon of expansive soil.

**Keywords:** Keywords: Expansive Soil; Pavements; Fly Ash; Metakaolin.

**References:**
Abstract: The primary function of subgrade is to provide a stable foundation for over lying layers of flexible pavement. Hence, the long-term performance of flexible pavement structures is considerably affected by the stability of the underlying soil layers. In general, in-situ subgrade soils may not provide the adequate support to attain satisfactory performance under various traffic loading and environmental demands. Pavement performance is merely dependent on properties of screening materials used to fill the voids of aggregate. It is required that at no time soil subgrade is overstressed. Further, it is supposed to be compacted to the desirable density and near the optimum moisture content. The prime reason for their failure was attributed to the use of low quality soils known as "GRS wall; nonlinear elastic-plastic model; PLAXIS 8.6; Backfill."
as marginal soils. Marginal soils have been used at several pavement project sites due to non-availability of select soils. It is also reported that the pavements may be severely affected due to the low-quality soils being allowed in the construction in view of the growing scarcity for granular subgrade soils. Unsuitable highway subgrade soil requires stabilization to improve its properties. The strength behavior of sub grade could be improved by stabilization with lime or fly ash. It can potentially lessen ground improvement costs by adopting this method of stabilization. This process is not only cost effective, but it also lessens the demand on non-renewable resources and reduces the environmental footprint of a road construction project. Further, it is reported that, one of the factors of concern is the failure of pavements due to liquefaction. When liquefaction occurs, the strength of the soil decreases and the ability of a soil deposit to supporting pavements, foundations for buildings and bridges are reduced. In this study an attempt is made to modify the properties of the marginal soil that can be improved by adding lime and fly ash. Also, to modify and reduce the plasticity index of the marginal soil; consequently, the workability of the marginal soil is examined, thus making marginal soils more effective under liquefaction.

**Keywords:** Marginal Soil; Stabilization; Liquefaction; Pavement Construction; Workability.

**References:**

**Authors:** S. Nithya, K.R. Aranganayagam, C. Nithesh

**Paper Title:** Atmospheric Pressure Plasma Surface Treatment of Rayon Fabrics

**Abstract:** The low temperature plasma is used to enhance the surface properties of rayon fabrics. The bulk properties of rayon fabrics are not affected by plasma treatment which is confirmed by XRD and FTIR studies. The investigation on the wettability of the rayon fabrics is the prime purpose of the study. The study includes the outcome of the investigational parameters of the glow discharge such as the pressure of gas, the time taken for the treatment and discharge voltage on the samples wettability.

**Keywords:** XRD, Plasma, Wettability, Rayon

**References:**
6. **Keywords:** Absorptives, Heavy metals, Various Peels.

**References:**
Abstract: In this paper, a compact MIMO with a size of 60 x 40 mm2 is designed for C-band applications. This design makes up of maintaining the reflection coefficient ≤ -10 dB and maintained the isolation ≤ -15 dB is achieved. In order to reducing the parameter of isolation consider the spacing between the antenna elements is 3 mm. By properly choosing this distance a large change the parameter of isolation and used in the applications of radar analysis and wireless communication system applications. This type of antenna arrangement producing good radiation patterns, peak gain, VSWR, diversity gain and group delay is observed.

Keywords: Group delay, MIMO antenna, correlation coefficient, diversity gain.

References:

Abstract: In view of structural engineering, the in assessment of seismic vulnerability of structure plays an important role in the analysis and design of structure. A variety of methods are in practice to carry out lateral load analysis on structure due to earthquakes. In this respect, time history analysis is a method to analyze a structure subjected to a specific earthquake ground motion. The seismic response of a structure majorly depends on type of soil and seismicity of location of structure. In this context an attempt is made to study the Linear Time History behavior of a G+5 RC framed building subjected to Bhuj earthquake ground motion considering the effect of soil type and seismic zone factor in accordance with IS-1893-2016 (part-1). A G+5 RC framed residential apartment building is modeled in ETABS 2015 software and analysis is carried out using time history function subjecting to Bhuj earthquake ground motion data for different values of seismic zone factor and soil types. Responses such as base shear, storey shear distribution and peak roof displacement are reported for different zone factors and soil type and tabulated the analytical study depicts that, with increase in seismicity of location of the structure, both base shear and peak roof displacement are been increased. Also, with increase in flexibility of soil, both base shear and peak roof displacement are been increased.

Keywords: Seismic zone; Soil type; Time history; Base shear; Roof displacement.

References:
irregularities” an International Journal on Engineering and innovative Technology (IJET), volume 3, April 2015.


Authors: Lavanya Settipalli, Siviah Bellamkonda, Ramachandran Vedantham

Paper Title: Morphology based Tense Aspect Disambiguation for sentences in Telugu to English Translation

Abstract: Tense, aspect and modality identification of one language and translating them to another language is a complex task in machine translation. Gaining the knowledge about tenses of a language requires complete morphology analysis of that particular Language. Native speakers of the language contain inbuilt knowledge of morphology but training the machines with this knowledge needs more effort. In this paper, we are proposing Tense, Aspect Disambiguation for the Telugu language by exploring the frequent co-occurrence of verb inflections with context words. TAD approach is to build Tense dictionary for Telugu based on the word written rules formed by morphology analysis and then automatically tagged each sentence of test data set with the tense to which it belongs. Tagged sentences then mapped to the grammar dictionary of English while translating. Our approach had performed on text written in WX notation1 by native speakers, which contains verb-included sentences.

Keywords: Morphology Analysis, Verb Inflection, Telugu Tense Rule Dictionary (TTRD), Tense Aspect Disambiguation (TAD).

References:

Authors: Kahkashan Tabassum, Hadil Shaiba

Paper Title: A Multipurpose Mobile Application for Air Cargo Management System for Saudi Airlines

Abstract: Shipping parcels plays a significant role in our lives. It provides us with products that are overseas, the essentials that we lack in our countries no matter whatever the size or quantity. In the shipping system we aim to ship parcels in high speed and high quality by providing several enhancements that demand highly secure systems protecting both the customer’s information and the shipment itself. Thus every shipping company strives to accomplish the shipping in a secure and trusted way, putting the customer in the highest priority. This paper explains an implementation of an android application (Airpress) that will help Saudi Airlines and associated companies in import and export of the items needed. The application allows customers to create cargo easily and quickly. A customer can register and create cargo at any time, and track the cargo by a single click. It’s a multi-purpose mobile application that aim to help companies to make it easier to have an app that is specialized for serving businesses. Examples of other majors tasks that the app can accomplish are: a) Door to door delivery by registered to make it easier and more convenient for customers – b) Providing more options for customers to find the suitable and preferred way to make their orders.

Keywords: Cargo, Delivery, Packaging, Receiver, Sender, Shipment, Status, Tracking number, Time frame.

References:
Abstract: Conventional wind turbines are restricted in its use due to certain limitations and challenges in its position. To use wind turbine efficiently and economically, it is required to overcome space requirements, noise, variation in air current and set up cost. This study attempts to design and fabricate suspended wind turbine to overcome the above stated hurdles. In this current work, the blades and the alternator are placed in the helium balloon housing which is suspended in the air and supported to the ground with tether. A tether made of conductive material is to transmit the generated power from the airborne housing to the ground base. Blades are made of aluminium and it ensures low rotational inertia. The proposed suspended wind mill in this study is able to generate power output which is comparatively cheaper than conventional wind turbines and also work will be able to cater the needs of electric power to remote areas and farms. Entire setup is modelled in 3D software Creo and the simulation is carried out using ANSYS software.

Keywords: Alternator, finite element method, turbine blade, renewable energy, power

References:
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Authors: Thanesalyer, Jaya Yadav

Paper Title: A Meta Analytic Review of Emotional Dissonance - It’s Cause and Impact

Abstract: Today, every organization has values, goals and objectives clearly communicated to employees, however the emotion of the organization is always downplayed and thereby is never accounted anywhere. In an organization, different employees have different emotions, which seldom align to organizations desired emotions. This difference in emotions is what we call emotional dissonance. This paper aims to understand emotional dissonance, its cause, impact and ways to reduce emotional dissonance were drawn. It was evident through review that all the key organization performance indicators of employee which effect the organization efficiency. It was also found that the emotional dissonance was not only confined to service sector were influenced by emotional dissonance and display no dissonance, its cause and impact on overall productivity of an employee as well as the role of emotional dissonance in improving the overall productivity of organization through employees. The study was carried out by reviewing the literature of past 19yrs from 1999 to 2017.Through the review of literature of past 19yrs the conclusion regarding cause, impact and ways to reduce emotional dissonance were drawn. It was evident through review that all the key organization performance indicators of employee which effect the organization efficiency were influenced by emotional dissonance and display norms of an organization, were found to be the major cause of emotional dissonance. It was also found that the emotional dissonance was not only confined to service sector job as per our preconceived notion, instead influenced the individuals irrespective of their location/sector they are working in. Hence it can be stated that emotions of employee are poorly managed and emotion demand of jobs are not appreciated. Thus, there is a strong need to work on ways to reduce emotional dissonance and to keep a check on it as there is very limited research on experiences of emotions at work.

Keywords: emotion, emotional dissonance, employee productivity, organization efficiency, performance indicators, display norms. JEL Classification: M540

References:
Aligning IS/IT with Business Allows Organizations to Utilize Dark Data

Any data that is left unexplored by an organization is an opportunity lost and a potential security risk says Ganesh Moorthy (2018). This paper discusses about the importance of aligning information system and information technology with business and how that helps organizations to utilize dark data efficiently. Moreover, the types of strategic alignment models and how organizations should adapt those models are also briefly described. The concept of dark data, types of dark data and how organizations can make use of it are further explained in this paper. The impact of dark data and tools to extract dark data is also discussed in this paper. The insights and discussions that are stated in this paper would definitely benefit organizations to understand the importance of aligning the business with IS/IT and make good use of darkdata.

Keywords: Information System, Information Technology Dark Data, Strategic Alignments Framework

References:
Abstract: Localization is an extremely important service in wireless sensor network and when nodes are mobile then it is the utmost challenge to keep the information of all nodes in the wireless sensor network. In last many years a good research has been conducted using many localization algorithms to provide solution for accurate positioning of nodes along with minimum energy consumptions by the nodes. But when nodes are moving continuously and positions are changing at every time period t then it might be difficult to localize all nodes at a time but it is achieved using trilateration techniques using cooperative approach among neighboring nodes of the network. In presented algorithm where each node is tracked by its current position after every fixed time interval period ‘t’ which will keep track of nodes current position for time t as well also predicts its position for next period of t i.e. 2t. In proposed algorithm to keep the localization error minimum we have selected two neighboring nodes for each node and every node updates its current and predicted position after every fixed time interval period. The minimum distance can be calculated by performing trilateration among two neighboring nodes with unknown position node. Trilateration is mainly used in range based localization. These coordinate differences between current and predicted positions for time t and 2t time slot give us a localization error. With presented algorithm we have found the efficient time period where average localization error will be minimum with minimum energy consumption. In Future with quality of service parameter as Packet delivery ratio (PDR) and ultimately increased in throughput of the network can be achieved.

Keywords: Localization, AoA, PDR, TDOA, TOA.

References:

Authors: Atul Choudhary, Sanjeev Bansal, Prashant Sharma, Anu Prashaant

Paper Title: An impact of recent technological reforms in Indian Railways on its revenue and its influence on the passenger satisfaction in terms of Service.

Abstract: An objective of this study is to find an impact of recent technological reforms in Indian Railways on its revenue and its influence on the passenger satisfaction in terms of service. Quality of customer service in Indian Railways has a significant role on the Passengers’ Satisfaction. Railways could draw higher economic benefits from its operations by improving its service quality. Various studies have pronounced many dimensions concerning about the Passengers’ satisfaction of Indian Railways. Below mentioned are the Five dimensions of Service Quality under SERVQUAL model which are taken in this research paper. Reliability, Responsiveness, Tangibility, Assurance and Empathy.

Keywords: Indian Railways, Rail Commuters, Technological Reforms, Revenue generation, Service quality.

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Authors:   
Jipson George Thoomkuzhy, Mohammed Nazeh, 

Paper Title:   
Change in the Role and Competencies of Global CIO’s in Cloud and IoT Based Organizations- A Study on it and Business Leaders

Abstract:   
Cloud computing and IOT has changed the path organizations crosswise over businesses work. This survey paper explored the role of the worldwide CIOs in regards to their key work limits and their fundamental capacities and competencies which are required all together for a CIO to achieve unrivalled various levelled execution without bounds of business condition in cloud and IOT based organizations. The revelations of this survey will offer understanding to five (business strategy, IT strategy, change agent, IT functional leader, Technology advocate) key work areas and the essential competencies which we acknowledge are principal to the role of the worldwide CIO in the present and future business condition. The revelations will furthermore demonstrate that the worldwide CIO role is twisting up logically and is key to driving improvement, various levelled change, and innovative change. Thusly, the worldwide CIO ought to be a visionary fundamental pioneer with famous social capacities and business perception and the ability to collaborate equitably over the focal business limits and with key business accessories. The role of the Chief Information Officer (CIO) has ended up being continuously trying and awesome as information correspondences advancement has ended up being basic for general organizations. To date, there has been little research which has precisely investigated the roles and the fundamental competencies of the worldwide CIO. An online outline of CIOs avowed the importance of CIO competencies and featured the essential ones. A course of action of the fundamental competencies of CIOs was broke down in this survey. The key disclosures exhibit that the role of the worldwide CIOs has advanced toward ending up continuously business drew in and crucial in a cloud and IOT based organizations. In the long run, how a CIO leads and manages his/her ICT staff will immensely affect how viable a CIO is in the role. In any case, the CIO still requires the learning of key advancement aptitudes along these lines, singular data or access to extra capacities is likewise basic in their role.

Keywords:   
Cloud, IoT, CIO, CTO, CEO, CFO, COO

References:

Authors:   
Deepesh Kr Yadav, Jaya Yadav

Paper Title:   
Perception of Employees About Changing Paradigm Shift Towards HR Practices In ITES Companies of Noida

Abstract:   
The present paper aims to investigate the evolution of HR Practices over the span of time as well as the change in the function of HR Practices in 21st century. The paper will also confer about the introduction of Information & Communication Technology (ICT) to the HR Practices in connection with an e-HRM. This paper in turn would help in finding out the paradigm shift and perception of employees in terms of acceptance e-HRM Practices, its simplicity of use and convenience as a HR Practices in ITES companies of Noida.

Keywords:   
e-HRM, HRM, Information and Communication Technology (ICT), Technology Acceptance
Role of Spiritual Leadership in Enhancing Employees' Job Performance: A study of Organized Retail Sector in India

Abstract: This study has been undertaken in order to understand the impact of spiritual leadership on the extent of job performance in organized service sector of India. For the purpose of the study, sampled population from three chosen organized retail stores in Delhi, NCR region have been chosen for conducting survey and their feedbacks have been collected by administering close-ended questionnaire among them. While the research findings establish positive correlation between employee job performance and spiritual leadership, it also suggests that this form of leadership is most effective in fostering organizational citizenship behavior and organizational commitment among employees.

Keywords: Employee Performance, Spiritual Leadership, Organizational Commitment, Job Satisfaction, Delhi NCR.

References:
The purpose of this paper is to investigate the role of the stakeholder in revenue mobilization at the MMDAs in Ghana as a roadmap to further identifying ways of achieving revenue improvements and poverty reduction by adopting e-governance mechanisms. This study also identifies three main roles of the stakeholders in the MMDs to be: Compliance, Motivation to comply, Enforcement; and a moderating role to be monitoring and supervisory. It was conducted in selected MMDAs in Ghana and the findings may not apply to all other MMDAs. There is also literature limitation. The practical implication should help understand the importance of adopting e-governance in Ghana’s revenue generation system which will help avoid problems like evasion and improve revenue as a dimension to poverty reduction. The paper identified role of the stakeholder at the local level. Previous studies focused on stakeholder management and regulations that help prevent evasion and other problems, thus this study delves into e-governance integration into Ghana’s revenue system which is an area that has not received much attention in several literature.

Keywords: Stakeholder, MMDAs, Metropolitan, Municipal or District Assemblies, Revenue mobilization, Revenue improvements, Poverty alleviation, E-governance.

References:
The Consumer Price Index as a measure of Consumer Price Inflation

Abstract: This study examines the relationship between the Consumer Price Index and consumer price inflation within Malaysia. The purpose is to establish whether or not the Consumer Price Index can be used as an accurate measure of consumer price inflation, the paper contrasts and compares historical data in order to establish a relationship between the two variables. Hence, a correlational methodology and approach has been adopted as is it imperative for an accurate comparison to be drawn. The historical data used and compared ranges from 2014 – 2017 however, a brief history was also required in order to gain an accurate understanding of the Consumer Price Index and inflation within the country, along with the factors that influence it; therefore, data from as far as 1973 was utilized within the literature review. Through this comparative study we can also gain an understanding of the type of impact (in terms of figures) that consumer price inflation has on the Consumer Price Index as either a percentage increase or decrease.

Keywords: consumer price index, inflation, Malaysia.

References:


Embedded System Based Secured Car Parking System

Abstract: Due to increase in both population and in the usage of cars the city experiences traffic congestion and air pollution. In a way of overcoming these issues, a scheduled parking system must be deployed. As the population increases, number of persons roaming around the city in searching for parking slots also increases. Though many solutions have been proposed, those solutions were not scalable. But this paper proposes a scalable and cost-effective solution for car parking and pre-booking. This can be implement educating sensors and processors. Ultrasound sensors are placed in each slot for finding the presence of cars and the data of ultrasonic sensor is fed to and cost

Keywords: Sensors, Processor, Arduino Mega, Node MCU, Ultrasonic sensor, Cloud server, Mobile application and Webpage.

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Abstract: This paper presented a novel improved resonant LLC converter with minimal components compared with existing design. Conventional Full H-Bridge in converter replace with differential boost for improving the overall gain of the circuit and also able to operated buck, boost and buck-boost. As a result, the component size is significantly reduced and enhance the size and cost of the converter. Different modes of operations presented for understanding the new converter in terms of switching frequency and gain. An Experimental and simulation result confirms the effectiveness of the proposed inverter.

Keywords: Resonant tank, DC-DC converter, buck, boost, buck-boost, switching frequency, inverter, overall gain.

References:

Authors: Tamilaras Viswanathan, P Maithili

Paper Title: A Novel Improved Resonant LLC Converter with Minimal Components

Keywords: Resonant tank, DC-DC converter, buck, boost, buck-boost, switching frequency, inverter, overall gain.

References:

Keywords: Resonant tank, DC-DC converter, buck, boost, buck-boost, switching frequency, inverter, overall gain.

References:
Authors: P. Thirumooorthi, Raheni T D

Paper Title: Artificial Neural Network Controlled Shunt Active Power Filter for Minimization of Current Harmonics in Industrial Drives

Abstract: In this paper development of three phase voltage controlled shunt active power filter is designed to compensate the harmonic current present in nonlinear line. The designed system overcomes the limitations of passive filter because of its resonance and bulky size. Voltage controlled shunt active power filter is the effective method for compensating harmonic elements caused by rectifier with RLE (nonlinear) load. In the proposed system classical PI controller is implemented and minimizes the ripple voltage of the DC capacitor voltage. The techniques used to control algorithm deals with the concept of instantaneous power of P-Q theory and a combination of neural network based intelligent technique to calculate three phase reference compensating current. The results of PI based instantaneous power of P-Q theory and intelligent technique such as artificial neural network based back propagation algorithm is implemented and simulation are carried out in MATLAB/ Simulink environment.

Keywords: PI controller, Voltage Controlled Shunt Active Power Filter (VCSAPF), Artificial Neural Network (ANN), Total Harmonic Distortion (THD)

References:

Authors: Ram Prabu J, Pavithra R, Aswini N, Francis Brindha A

Paper Title: Wireless Smart Biometric Attendance System

Abstract: The most generally utilized techniques for taking participation in the classroom is by calling the learners to physically sign the participation sheet which is ordinarily passed around the study room while the educator is driving the lecture. In past, the records are taken physically and maintained the student’s records. It was an inconvenient job for the teachers. To overcome these issues, we develop a smart biometric attendance system which takes participation of understudy and keeping up its presence in a scholastic establishment. With the assistance of a unique mark sensor module and every student presence are saved on a PC. Through wireless transfer system reports are saved on the computer system.

Keywords: Arduino UNO, Fingerprint sensor, Zigbee and GSM Modules

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Authors: Tamilarasu Viswanathan, R Rajesh
Paper Title: Minimax Optimization of PV Panel Specifications for Different Temperatures
Abstract: Mini-max optimization scheme used for identify the PV Panel parameters for different temperatures is presented. PV panel parameters such as output current and voltage with temperatures ideal data taken into account for optimization. Analysis done for both normal and abnormal temperatures. Initially, the data sheet parameters use for setting default values for setting the optimization criteria. This values are developed from Short circuit current and corresponding resistances. After the optimization, the value minimize the maximum values responsible for deviation in the optimization produce improved results. Error in the optimization produce improved results. Error calculation done or showing the accuracy of the proposed method and optimization curve match with presented data.

Keywords: PV panel specification, Mini-max Optimization, Temperature variation, Data Extraction
References:

Authors: Tamilarasu Viswanathan, S Suryaprakash, P Abinesh
Paper Title: Spread Spectrum Modulation for Multi-Input DC-DC Converter
Abstract: This project develops spread spectrum modulation for multi–input buck DC-DC converter, with a low number of components. At the same time, independent power transfer capability is provided for input sources. With the use of a battery without any additional switches the power flow capability has been provided. It is best suited for hybrid energy systems or hybrid electric vehicle / electric vehicle applications. Various functional methods of the proposed topology were provided. Subsequently, a common relationship proposed to be proposed to calculate the stimulus calculation of the proposed n-input pug topology. Furthermore, a simple proportional control output is used to regulate the voltage and assign a portion of the power to supply each internal source. The tentry edition was modeled on modeling and simulation modeling in the proteus software to ensure the authenticity of the proposed topology and theoretical concepts.

Keywords: Spread Spectrum Modulation,DC-DC con- verter,Random Pulse width,Renewable applications
References:

Authors: R. Kavitha, Niranjana C, M. Nirmala, S. Surya Prakash
Paper Title: Intelligent Transport and Safety Assisting System
Abstract: The novel concept Intelligent Transportation System (ITS) has been framed in this paper that provides accident detection system, seat belt monitoring, vehicle pollution monitoring and density based dynamic traffic control. Accident Detection system provides the information about the accident cases occurred in a place through GPS and GSM where the vibration of the vehicles after a certain limit is indicated using vibration sensor. In pollution monitoring system if the quality of emission of gas from the vehicle is not at standard rates it is...
detected by gas detection sensor and high emission is indicated by an alarm. When the seat belt is locked the motor gets triggered and starts the vehicle else the motor remains non-triggered. The traffic can be controlled dynamically using sensors and it sends data to the controller based on the density at each intersection of the junction. All these information assist the user to enhance the efficiency and accuracy.

**Keywords:** ITS, Density control, Safety assistant.

**References:**

**Authors:** Arulananth TS, Praveen Sagar S, Anusha B

**Paper Title:** VLSI Design of An Area & Time Efficient Design of Overloaded CDMA Architecture Using Han Carlson Adder

**Abstract:** On-chip interconnects are the performance bottleneck in modern system-on-chips. Code-division multiple accesses (CDMA) have been proposed to implement on-chip crossbars due to its fixed latency, reduced arbitration overhead, and higher bandwidth. In this paper, we advance overloaded CDMA interconnect (OCI) to enhance the capacity of CDMA network-on-chip (NoC) crossbars by increasing the number of usable spreading codes. Serial-OCI and P-OCI architecture variants are presented to adhere to different area, delay, and power requirements. Compared with the conventional CDMA crossbar, on a Xilinx Spartan-3E FPGA kit, the serial OCI crossbar achieves 100% higher bandwidth, 31% less resource utilization, and 45% power saving, while the parallel OCI crossbar achieves N times higher bandwidth compared with the serial OCI crossbar at the expense of increased area and power consumption. Further to increase the speed of OCI crossbar we are implementing Han Carlson adder in place of parallel adder architecture. The use of Han-Carlson adder gives better performance than the existing system by 38% area reduced and 49% speed increased.

**Keywords:** Code-division multiple access (CDMA) interconnect, CDMA router, network-on-chip (NoC), NoC physical layer, overloaded CDMA crossbar, Carry Select Adder, Han Carlson adder.

**References:**


**Authors:** Nekkanti Haripavan, Nandyala Sivikishan

**Paper Title:** Identification of Development Dynamics in the Krishna Eastern Delta and Its Future Impacts on Water Availability and Quality with Focus on Soil Productivity and Its Degradation

**Abstract:** Water is a precious resource for life to exist on planet Earth. Already the water demand exceeds supply in many parts of the world. The water resources are finite and currently under tremendous pressure due to vagaries of nature and population growth. The over-exploitation and mismanagement of this resource is exerting detrimental impact both in the catchment and command areas. The Water Use in the Krishna District is likely to increase at least by 50% due to rapid population growth, industrialization and agriculture in the next 20 years. The current emphasis is more on economic development and not on environmental safety and sustainability. Many river basins are becoming closed in South India, in which additional water is conserved at various upstream points affects the people using the water at downstream side and brings in large conflicts between upstream and downstream users. It is evident that the closure of Krishna basin and the resulting drastic shortfall of irrigation water to the Krishna river delta and land use dynamics had their serious impacts on crop, land, soil and environment on a decadal scale. We have already witnessed how the Kolleru fresh water lake ecosystem has deteriorated in a short span of two to three decades. Mismanagement of water resources is causing salt water intrusion in the coastal regions of maritime states. Ingress of sea water deep in to inland aquifers, soil salinity due to use of chemical agricultural inputs and brackish water aquaculture are leading to land degradation. In this view, timely and reliable data of the extent, spatial patterns, and nature temporal behaviour is a pre-requisite. In the light of above, an updated digital spatial database of Krishna district has been generated on lithology, structure, geomorphology and hydrology by adopting geospatial technologies coupled with traditional or conventional data sets for identifying ground water potential zones in Krishna district. This paper aims at highlighting some insights into the groundwater and surface water dynamics of the the Krishna Eastern Delta and the Inter-deltaic plain of Kolleru Lake system.

**Keywords:** GIS, CRDA, NBSS

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**Authors:** P. Pradeep, S. Harish, D. Ravikanth, Malathi Narra

**Paper Title:** Performance Based Congestion Control using Video Graphic Volume Count for an Uncontrolled Intersections in Vijayawada City – A Case Study

**Abstract:** The rapid changing in environment of traffic has impacted and led to the problem of traffic congestion. Vijayawada has been mentioned as a city that is developing rapidly which has caused changes in social structure extensively. The expansion area of the city has been expanded fragmentally based on basic infrastructure, the transportation infrastructure can’t support the growth of city and rapid increase in population. Due to traffic congestion many huge problems are occurring like wastage of time, accidents, wastage of money, pollution etc. To overcome all these problems congestion control measures should be adopted and we selected a corridor in Vijayawada city having uncontrolled intersections are evaluated using video graphic technique.

**Keywords:** traffic, pollution, video graphic technique

**References:**
3. Krause et al., guohuizhang et al., A summary of vehicle detection and surveillance technologies used in .Fedral highway
Analyzing Strength Characteristics of Self Compacting Concrete by using Hair Fibre as a Partial Replacement of Cement

Abstract: In a field of construction, eco-friendly, cost and time are the three key factors which every civil engineer have to satisfy. For that purpose we use human hair which is going as a waste in our experimental study and determining the positive effect in the properties of concrete as fibre reinforced concrete. Annually 40 tones of hair is available throughout the world causing problems in degradation, by using hair as a fragmentary replacement of cement in concrete can reduce environmental problems. Though hair is a typical bio-degradable matter available in abundance at cheaper cost so that we can also reduce some cement content and cost factor. On the other hand a new technology named self-compacting concrete which is developed by the skilled workman ship is used. Using SCC can shorten the time and decrease the cost of building process. SCC has good elastic property in fresh state and have high resistance to segregation, it can spread under gravity due to its self weight without any vibration or compaction. The incorporation of randomly distributed hair fibre in SCC enhances its tensile property (i.e. human hair is strong in tension), and effective in delaying micro cracks and also hope combination of these two made a new technology views saving environment and making a construction with ease come reducing cost and saving the time of project. Experiments were conducted on concrete cubes of standard sizes (0.15m3) with addition of different proportions of human hair fibres (i.e. 0%, 0.25%, 0.5%, 0.75%, and 1%) by weight of cement. In this work, fly ash is used as mineral admixture and PCE based super plasticizer as chemical admixture for achieving fluidity nature. For each percentage of hair fibre added in concrete, the 7 days, 14 days and 28 days compressive strength of cubes are obtained by crushing in compression testing machine.

Keys: Self compacting concrete; Fibre reinforced concrete; Human air fibre; Fly ash; Compression testing

References:
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Implementing and Testing of IoT Technology in Agriculture

Abstract: Agriculture involves various physical quantities that need to be monitored and controlled. IoT have several capabilities which are suitable for implementing Precise Agriculture. IoT architecture involves sensors, nodes and computing which can be edge, fog and cloud computing. In IoT there has been a need of communication between nodes, nodes and gateway and gateways to cloud. Different protocols are used at different layers of IoT architecture for communication. Those must be analysed for selecting appropriate
protocol for an application. As IoT uses low power devices resources must be utilized properly. There has been a need of low bandwidth, low power communication protocols both in application and network layers to support heavy traffic in power constrained devices. In this paper detailed comparison is made between application layer protocols used in IoT namely MQTT and HTTP for their suitability in IoT applications.

Keywords: IOT, HTTP, MQTT.

References:
15. Bing, F., 2016, October. The research of IoT of agriculture based on three layers architecture. In Cloud Computing and Internet of Things (CICIOIT), 2016 2nd International Conference on (pp. 162-165). IEEE.

Authors: Amjan Shaik, B. Madhurima, M. Neelakantappa

Paper Title: An Approach to Zero Knowledge Proof for Secure Data Sharing in Cloud Storage: New Direction

Abstract: Now a days, Cloud computing (CC) is seriously growing because of it’s strengths like elastic, flexible, on-demand storage and fast computing services for users. In cloud based storage concept, data owner does not have full control over own data because data controlled by the third party called cloud service providers (CSP). The most challenging issue in data security arises when the owner of the data shares to other through cloud. This issue is very common as data is shared in the cloud computing environment. This issue is addressed by few researchers through encryption techniques of cryptography to provide secure data-sharing on the cloud. In this paper, we propose a model to provide security of shared data on cloud in terms of access control and data confidentiality. This system eliminates the need of key management and file encryptions and descriptions by the users. It also supports dynamic changes of user permissions (Read,Write), there by removes the need of owner
to be always online during user accessing of data from cloud. In this system, we extended the notion of zero-knowledge proofs of the membership (that reveals 1 bit of information) to zero-knowledge proofs of the knowledge (that reveals no information at all). The common weakness of conventional communication protocols is they are vulnerable to the impersonation attacks. Each time this type of protocol is executed, the system degrades due to the threat of an eavesdropper listening the communication. The main objective of this designed system is that it makes possible for a prover for convincing a verifier of his knowledge of a certain secret without revealing any information apart from validity of his claim.

**Keywords:** Cloud computing, cloud storage, Data security, cloud service provider, secure sharing, cryptography.

**References:**


**Authors:** T. Prasad P. Chinna Srinivasa Rao, B. Vijay Kiran

**Paper Title:** Study on Mechanical Behaviour of Hybrid Composites

**Abstract:** Composite containing more than one type of fiber is known as hybrid composites. Natural fibers and artificial fibers can be used for fabrication of Hybrid composites. Hybrid composites will give mechanical properties than fiber reinforced composites. The element of fibers in Hybrid composite, the elements of fibers can be changed in different ways leading to variation in its properties. For preparing the hybrid composites using different fibers reinforced with matrix. Hybrid composite has wider applications across industries such as aerospace, automobiles, Marine etc. In this paper, fabrication of hybrid composites is done manually using hand layup method. It is then subjected to a compressive load for thorough distribution of resin in respective lamina. The fabricated composite is tested for its flexural and tensile properties. The result obtained are further analyzed for the study of the material fabricated.

**Keywords:** Hybrid composites, Natural fibers, fabrication, Tensile, Flexural

36.

**References:**


37.

**Authors:** P R Anisha, B Vijaya Babu

**Paper Title:** EBPS: Effective Method for Early Breast Cancer Prediction using Wisconsin Breast Cancer Dataset

**Abstract:** Machine considering is a branch of computerized reasoning that contain a dissemination of factual, probabilistic and enhancement systems that enable PCs to "examine" from past illustrations and to run over hard to recognized examples from vast, loud or muddled data units. These abilities are exceptionally pleasantly alluring to logical bundles, principally those that rely on confounded proteomic and genomic estimations. In this paper, we dissected the bosom Cancer actualities to be had from the Wisconsin dataset from UCI gadget learning with the reason for creating exact expectation rendition for bosom growth and proposed Effective Breast Cancer Prediction System. The proposed variant is in examination with introducing approaches in expressions of exactness, specificity and missteps cost.

**Keywords:** These abilities are exceptionally pleasantly alluring to logical bundles

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205-211
References:
10. Val`erie Bour`d’es, St’ophane Bonnevay, Paolo Lisboa, R`emy Defrance, David P’erol, Sylvie Chabaud, Thomas Bachelot, Th’e’es Gargi and Sylvie Negrier “Comparison of Artificial Neural Network with Logistic regression as Classification Models for Variable Selection for Prediction of Breast Cancer Patient outcomes”.

Authors: G. Balram , D. Gurvinder Singh

Paper Title: IoT-Health Check-Up using Arduino Microcontroller

Abstract: Health, an important biological system for the human where the sickness rises or fall according to the immune system are clubbed with the technologies of IoT to form a scenario of Health Monitoring. Though they're meant to assist folks, the response and attitude to apply such new gadgets by methods for the oldsters can be amazing, especially among the more established. A fall event is one in all the most factors that impact the physical buddy degreed mental wellness of a more seasoned character. mishaps related with falls include physical harms like coronary heart attacks, bone breaks, and general creature tissue sores. A fall has furthermore sensational mental impacts since it fundamentally lessens the sureness and autonomy of influenced people. valuable asset time exploitation wi-fi sensors has achieved a high level of development and responsibleness and thus those gadgets are as of now being conveyed in homes/nursing homes to be utilized for managing people's wellbeing. in this task, friend certificate expanded fall location contraption is anticipated more seasoned time exploitation wi-fi sensors has achieved a high level of development and responsibleness andthus those gadgets are as of now being conveyed in homes/nursing homes to be utilized for managing people's wellbeing. in this task, friend certificate expanded fall location contraption is anticipated more seasoned

Keywords: Arduino, health observance, IOT.

References:


Authors: K.Vinay kumar

Paper Title: High Efficient Three Phase Harmonics Elimination System for Induction Motor

Abstract: Symphonomous relief may be a key issue in mechanical and conjointly business drive applications. The wide utilization of non-direct hundreds causes vital power quality debasement up to the mark dissemination systems. The planned strategy is made to agitate sounds in grid connected (GC) mode, and within the islanded or freelance (SA) methodology of task, wherever the elemental target is to expel the harmonic from the framework current and also the point of common coupling (PCC) voltage. The arranged position of the agreeable decline unit deals with the work of a novel controller structure that utilizes the sounds measure inside the d-q reference outline. Inside the arranged administration figuring, the predetermined live of change for consonant is made plans to fulfill the blend amicable curving. A total amusement indicate is made with a chose complete objective to watch the execution of the arranged consonant compensator. The arranged methodology is also existent by interfacing acceptance machine to the yield and execution of the engine is analyzed using Matlab/Simulink programming.

Keywords: Total harmonic Distortion, Point of Common Coupling, Induction Motor Drive, Grid Connected Mod

References:

Authors: Moinuddin K Syed. K. Raghuvreer

Paper Title: A Novel Research on Improving the Overall Efficiency Among Hard Switching and Soft Switching Circuits using Optimization Techniques

Abstract: In recent years, Photovoltaic (PV) renewable energies are considered as an essential source of non-polluting and cost-free energy. be that as it may, the execution of the predominant enhance converter is diminished because of hard and smooth exchanging which makes misfortunes while the switches are moved toward becoming ON/OFF. so as to beat those inconveniences, this paper proposed novel investigations for boosting the effectiveness of delicate exchanging enhance converter the use of advancement method. in this, the delicate exchanging raise converter with R-load and RL-stack are propelled the utilization of a Simple Auxiliary Resonant Circuit (SARC) which includes the switch, diode, capacitor, and inductor. This circuit is used to operate the main switch with Zero Voltage Switching (ZVS) and Zero Current Switching (ZCS). In addition, Cat Swarm Optimization (CSO) algorithm is used to improve the performance of PI controller by upgrading the controller gain. The exam and approval of the proposed delicate changing help converter making use of CSO calculation were reenacted in MATLAB Simulink programming. The endeavor results reveal that the sensitive changing assist converter utilising R-stack accomplishes faded variances and replacing misfortunes than utilising RL-stack. also, the outcomes exhibit that the talent of the proposed delicate replacing assist converter is upgraded with the aid of approximately 4.five% utilizing cat swarm optimization (CSO) than the hard switching boost converter.

Keywords: Photovoltaic (PV) cell; Soft switching boost converter; hard switching boot converter; Cat Swarm Optimization (CSO); Simple Auxiliary Resonant Circuit (SARC).

References:


Authors: J. Shiva Prashanth, Shaik. Gousiya Begum

Paper Title: Congestion Control in Spatial Networks During Disasters

Abstract: Extensive quantities of algorithms have been proposed to solve shortest path inquiry issues for static or time dependent spatial networks; be that as it may, these algorithms don’t perform well to discover the nearest shelter with fastest paths in a disaster circumstances. In a disasters, path figured through existing algorithms and saved as the fastest may end up harmed. ONSC approach provides optimal path in a disaster circumstance however doesn’t manage with congestion control. To tackle this issue, this paper proposes a strategy to diminish the travelling time with an existing dynamic network:display, which is called an Event dependent network, to represent a spatial network in a disaster which assist the general population with choose the optimal path by giving weight-factor(in percentage) of the congestion in the road network.

Keywords: Congestion control, Event dependent network, Path planning and Disaster management.

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Kim, Jinhua, et al. “Processing time-dependent shortest path queries without pre-computed speed information on road networks,” Information


Authors: Sundilla Ravi, D. Krishna

Paper Title: Improvement of Dynamic Performance of Induction Motor Drives by using FLC Based MPFC

Abstract: This project proposes a model predictive flux control (MPFC) system based SVM for IM drive supplied by a three-level - neutral-point -clamped (3L-NPC) inverter with fuzzy logic controller. MPFC is a sort of effective control strategy for high operation of IM drives, which manages one of a kind momentary powerful behavior. be that as it may, MPFC experiences dull and time extreme alignment work for the weighting components, which is an obstacle for its utility, especially in the staggered converters. To fathom this inconvenience, it proposes MPFC machine principally dependent on SVM for IM drive. by methods for interpreting references of torque and stator motion size into an equivalent new stator motion vector reference, MPFC disposes of the utilization for weighting components. Fundamentally based at the FLC the pristine stator transition vector is the transpose to a voltage vector reference. that is then incorporated by means of a SVM square. The power of the proposed controller is confirmed by method for utilizing Matlab/Simulink in expressions nation and dynamic reactions.

Keywords: Induction motor drive, MPFC, SVM, Fuzzy logic controller and Matlab/Simulink.

References:
Effect of HRM practices in implementation and adoption of Human Resource Information System (HRIS) in some selected manufacturing industries of Midnapore district of West Bengal – an empirical analysis

Abstract: Managing the workforce of the manufacturing companies has always been a challenging and onerous task with the Human Resource (HR) department. In this platform, the department plays a strategic role in creating an employee oriented and productive workplace; advancing a positive work environment. The department maintains its efficacy through solid information system infrastructure which easily aligns with that of the business objectives. Human Resource Information System (HRIS) is a key tool that strengthens the functioning of the different HR practices in the organization and brings decisive results. The system enhances applications such as human resource planning, career planning, training projections, monitoring employee performance, analyzing data regarding the human resource thereby making strategic reports. The growing need of reinforcing and corroborating human resource management functionalities, HRIS has been well accepted in organizations today. For the survey, primary data was collected based on convenience sample. The feedback was taken from the different HR staffs and officials of the selected manufacturing companies. Response rate turned to 92 %. Multiple regression Analysis was conducted on the proposed research model and was found that the Training and Development practices have the most significant influence in adoption of HRIS in organizations.

Keywords: Human Resource (HR) department, Human Resource Information System, efficacy, strategic reports

References

Interference Mitigation Techniques for Advanced Cellular Communications using MIMO Based Smart Antenna Beam forming

Abstract: Wireless Communication Technology has developed many folds over the past few years. One of the most reliable techniques to enhance the data rates is called Multiple Input Multiple Output (MIMO) wherein severa gathering mechanical assemblies are used each on the transmitter and the authority, various signs are transmitted from differing radio wires on the transmitter utilizing an equivalent repeat and segregated in space, restrictive channel estimation techniques are connected so as to condemn at the substantial effects of the medium blessing, in this paper, we look at and realize particular estimation structures for MIMO OFDM Systems such as Least Squares (LS), Minimum Mean Square Error (MMSE), Constant Modulus Algorithm (CMA) and linear
Pre-coding. These techniques are therefore compared to effectively estimate the channel in MIMO OFDM Systems. There are a few versatile beam forming strategies like LMS (slight mean square) calculation beam forming, RLS (recursive minimum square) computation beam forming methodology. They are especially convincing procedures to relieve the obstruction

**Keywords:** MIMO, LMS, RLS, OFDM

**References:**

**Authors:** S. Sasikala, M. Bharathi, B. R. Sowmiya

**Paper Title:** Lung Cancer Detection and Classification Using Deep CNN

**Abstract:** Lung cancer is one of the most killed diseases in the developing countries and the detection of the cancer at the early stage is a challenge. Analysis and cure of lung malignancy have been one of the greatest difficulties faced by humans over the most recent couple of decades. Early identification of tumor would facilitate in sparing a huge number of lives over the globe consistently. This paper presents an approach which utilizes a Convolutional Neural Network (CNN) to classify the tumors found in lung as malignant or benign. The accuracy obtained by means of CNN is 96%, which is more efficient when compared to accuracy obtained by the traditional neural network systems.

**Keywords:** Lung cancer, Computed Tomography, Chest CT image, Neural Network, Deep Learning, Convolutional Neural Network

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2. https://www.livemint.com/Politics/3eXX60XiBig4hWZ25Kri1Q0/India-recordedabout39-million-cancer-cases-in-2016data.html

**Authors:** Pavan Kumar K, S.V.N Srinivasu

**Paper Title:** An Approach for Extracting Viewpoint Patterns using Geometric Directions

**Abstract:** Vast improvement in technology significantly increases in the collection of images in a huge quantity. Most of the technologies like IoT, sensors, scanners, point of sales, internet, etc. are gathering the data in the form of images. Image processing researchers introduces many algorithms to process the images and tried to extract information from the images. Due to the drastic development in data mining research give you an idea about the way for extracting the value from the data which helps to improve the business and image database is not an exception for this. Many researchers are trying to present the algorithm in the image mining area for extracting the value from the image data databases. Recently Wynne Hsu, Jing Dai, and Mong Li Lee introduced new type of patterns called viewpoint patterns which exhibit the invariant relationship between the objects. But the algorithm suffers from costly operation of building the object table at every level. We design a new algorithm for extracting the viewpoint patterns which builds the object table only once and uses this information at every level and our algorithm is based on the relationship between the objects only.

**Keywords:** Image mining, viewpoint patterns, data mining, invariant relationship

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2. S. Rajeshwari and T. S. Shammila, “Efficient quality analysis of mri-image using preprocessing techniques,” in Information &


Authors:  Y. Suresh, S. V. N Srinivasu

Paper Title: Finger print Classification by using the Delaunay Triangles

Abstract: The use of biometrics has increased drastically with the evolution in hardware and software technology. Matching of finger prints are used for two types of system is used for two types of applications; one is finger print verification and another one is finger print identification. The fingerprint identification is computationally expensive one. In this paper we are proposing a approach for fingerprint classification and our main contribution in this paper is we consider the cost of minimums spanning tree constructed using the set of points represents the ridge bifurcation of ridge endings of the fingerprint and also we considered the special points which are participating in more than s triangles in Delaunay triangulation.

Keywords: Biometrics, Finger prin, WFMT, Delaunay Triangle

References:


Abstract: Deep Learning is gaining lot of prominence due to its break through results in various fields like Computer Vision, Natural Language Processing, Time Series Analysis, Health Care etc. Earlier, the Deep Learning was implemented using the batch and stochastic gradient descent algorithms and some optimizers which lead to very less performance of the models. But today, lot of work is going on for the enhancement of the performance of Deep Learning using various optimization techniques. So, in this context, It is proposed to build a Deep Learning model using various Optimizers (Adagrad, RmsProp, Adam), Loss functions (mean squared error, binary cross entropy) and Dropout concept for the Convolutional neural networks and Recurrent neural networks and verify the performance such as Accuracy and Loss of the model. The proposed model has achieved maximum Accuracy when Adam optimizer and mean squared error loss function are applied on convolutional neural networks and the model is run with minimum Loss when the same Adam optimizer and mean squared error loss function are applied on Recurrent neural networks. While performing the Regularization of the model, the maximum Accuracy is achieved when the Dropout with a minimum fraction ‘p’ of nodes is applied on convolutional neural networks and the model has run with minimum Loss when the same dropout value is applied on Recurrent neural networks.

Keywords: Deep Learning, Convolutional Neural Networks, CNN, Recurrent Neural Networks, RNN, Computer Vision, Natural language processing, Time Series Analysis.

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Keywords: camoid, governor, variable valve lifting.
I process known as soil stabilisation. Using FEA, the strength of the vehicle. Modelling of the spring is done for these traditional metallic leaf springs. In this paper composite materials like Epoxy, Steel, Kelvar, Glass Epoxy, Carbon fiber reinforced polymer, kelvar, steel leaf spring, catia and ansys are used against the conventional steel for heavy weight vehicles with the objective to minimize the weight of the vehicle. Modelling of the spring is done in CATIA and analysis is carried out in ANSYS.

Keywords: E-Glass epoxy, S-Glass Epoxy, Carbon fibre reinforced polymer, kelvar, steel leaf spring, catia and ansys

References:

Authors: A. Raveendira, Mohammed Abdul Muhbshir

Paper Title: Design and Analysis of Leaf Spring for Heavy Weight Vehicles using Composite Materials

Abstract: At present, we can find numerous leaf springs made up of steel which are utilized for the purpose of suspension of light weight to heavy weight vehicles. It is discovered that the conventional leaf springs and unsprung weight to the vehicle and diminishes its fuel efficiency. Since the composite materials are the advanced materials with higher strength to weight ration and higher corrosion resistance, they are found as the potential substitues for these traditional metallic leaf springs. In this paper composite materials like E-Glass epoxy, S-glass epoxy, carbon fibre reinforced polymer and kelvar are used against the conventional steel for heavy weight vehicles with the objective to minimize the weight of the vehicle. Modelling of the spring is done in CATIA and analysis is carried out in ANSYS.

Keywords: E-Glass epoxy, S-Glass Epoxy, Carbon fibre reinforced polymer, kelvar, steel leaf spring, catia and ansys

References:

Authors: K.Shimola

Paper Title: A Study on Soil Stabilization using Sugarcane Bagasse Ash

Abstract: Black cotton soil is the base of a structure which helps in equally distributing the load and supports the super structure and foundation. If the soil stability is not adequate then failure of structure takes place in form of settlement,cracks. Black cotton soil are also called as expansive soils which is responsible for such situations and is due to presence of mineral called montmorillonite in it, which experience shrinkage and swelling. To overcome this properties of soil are improved by mechanical and chemical process known as soil stabilisation. Many research has been conducted for stabilisation of soil by using cementing, chemical materials like flyash,calcium chloride, sodium chloride etc. In India, limited techniques are followed in agricultural waste disposal. India is second largest country in the production of sugarcane with 341,400 thousand metric annual tones(TMT) produce. Western Maharashtra is pioneer in production of sugarcane in large quantities sugar cane factories produce waste after extraction of sugarcane juice in machines and that waste after burning produce ash known as bagasse ash. It is made up of fibrous material having silica and puzzolonic in nature which improves the physical properties of black cotton soil. Experiments are conducted on black cotton soil by

References:
partially replacing bagasse ash (4\%, 8\%, 12\%, 16\%, 20\%). Black cotton soil properties of are increased at 16% by replacing of bagasse ash not including any chemicals.

**Keywords:** Soil Stabilisation, Black Cotton Soil, Bagasse Ash, Unconfined Compression Test, Maximum Dry Density

**References:**

**Authors:** M. Swami Das, A. Govardhan, D. Vijaya Lakshmi

**Paper Title:** An Approach for Minimizing the Response Time and Improving Availability of Web Services

**Abstract:** The worldwide use of the Web-based application is increasing rapidly in various domains like E-commerce, banking etc. The Web users use mobiles, smart devices, laptops and PC. The devices use communication protocols with the Internet based web application. Web services are APIs, design application use of SOA Architecture, SOAP, UDDI and WSDL specifications. In this paper, we have discussed the basic elements, the applications to require high-quality parameters related to computer networking, operating system, software related parameters, response time and availability. The minimum response time to invoke operations with use of Optimized Multi-level Shortest Remaining Time CPU scheduling algorithm to minimize the waiting time to achieve high availability of services even in failure of the system the recovery procedures by providing backup, elastic and Fault-tolerant services. We have used the QWS dataset, Dream set and Grid dataset for experiments. The experiments on this dataset improved performance minimizing response time (RT) and increased availability

**Keywords:** Web service, QoS, Response Time, availability, operating systems, FTS, Performance, software

**References:**
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Deep Rapping: Character Level Neural Models for Automated Rap Lyrics Composition

Abstract: Dope”, “Twerk”, “YOLO”, these are just some of the words that originated from rap music which made into the Oxford dictionary. Rap lyrics break the traditional structure of English, making use of short and invented words to create rhythmic lines and inject informality, humor, and attitude in the music. In this paper, we attack this domain on a computational perspective, by implementing deep learning models that could forge rap lyrics through unsupervised character prediction. Our work employed novel recurrent neural networks for the task at hand and showed that these can emulate human creativity in rap lyrics composition based on qualitative analysis, rhyme density score, and Turing test performed on computer science students.

Keywords: Gated Recurrent Unit; Long Short-Term Memory; Natural Language Generation; Recurrent Neural Networks.

References:

Synthesis and Characterization of Porous Calcium Oxide Nanoparticles (CaO NPs)

Abstract: Calcium oxide nanoparticles (CaO NPs) gain great value in the areas of energy storage and drug delivery systems. Due to good porosity it finds its part in storage systems and its biocompatibility earns it a good value in drug delivery and gene transfection. In this present work, calcium oxide nanoparticles are prepared by means of simple precipitation method. Thus prepared particles are subjected to morphological, size and structural analyses. The X-ray diffraction studies revealed the polycrystalline nature of CaO nanoparticles. The SAED pattern confirms the polycrystalline nature. Transmission electron microscope shows that the size of the particles varies between 80 nm to 190 nm which is in good agreement with particle size analysis results.

Keywords: CaO NPs, Precipitation, XRD, TEM

References:
Adaptive Filter Architecture for FPGA Implementations

Abstract: Adaptive filters play a significant role in digital signal processing but their implementation in real-time consumption high area and power. Several architectures have been proposed for their real-time implementation such as Distributed Arithmetic, CORDIC, Systolic, etc. which reduces the area and improves the speed. All these architectures are multiplier less and among these, the CORDIC structure is simple and gives reduction in area at the cost of speed. To overcome this drawback, it is modified by implementing it along with Karatsuba algorithm (KA). The combination of KA algorithm and CORDIC structure gives better performance in terms of area and speed. The proposed work is implemented using Xilinx system generator. The structure is tested for different bit representations and the results show that the proposed structure has better performance compared to the existing structures. The proposed structure can be used in applications such as RADAR, Channel Equalizers and Noise Cancellers.

Keywords: Adaptive filter, FPGA, CORDIC, KA algorithm

References:
A wide theoretical and experimental study was made on different types (welded and bolted) of beam-to-column connections has been made using Reduced Beam Section (RBS) concept. The beam is reduced on the flange with specified radii on both sides of the section. Totally 6 different models have been analysed ANSYS. Single and Double stiffeners are additionally provided in order to increase the time taken for deformation thereby avoiding sudden collapse in the structure. Total deformation is the main parameter considered in the study. Comparing the results from the ANSYS software and thereby choosing the critical section. Then the critical section is developed into a 3 storey frame for which push over analysis is performed using E-TABS. Performance of the building is observed at different stages of hinge formation and push over curve is plotted.

Keywords: Reduced Beam Section, Stiffener, Bolted Connection, Welded Connection, Notch.

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Authors: J. Premalatha , N. Lakshmipriya

Paper Title: Seismic Retrofitting of Beam-Column Joints in RCC Buildings Using Jacketing Techniques Along With Cross Bars

Abstract: An analytical study on seismic retrofitting of a reinforced concrete Beam-column joint was performed using FEM modeling. The main objective of this study is to increase the shear capacity and load carrying capacity of the structures using retrofitting techniques. In this study, the retrofitting was done by jacketing methods like carbon fibre reinforced polymer sheets (CFRP), Glass fibre reinforced polymer mesh, Sisal fibres along with crossed bars are carried out using the ANSYS Workbench. The wrapping of beam column joint was done by single, double, triple layer of CFRP, GFRP and Sisal fibres with different thickness. During the analysis one end of the column were fixed. Cyclic loading was applied at the free end of the cantilever beam in Beam-column joint and Fixed load was applied at the top of the column. The load is applied up to the ultimate load to obtain the fatigue failure. This report discusses about the performance of the retrofitted beam column joint; and was compared with the conventional specimen.

Keywords: Beam-column joint, CFRP, GFRP, Sisal fibres, Jacketing techniques

References:
Abstract: The performance evaluation of a 20-Storey steel moment resisting frame [1] incorporated with viscous fluid dampers in lower toggle configuration under earthquake loads was carried out using SAP 2000 software. The time history analysis was carried out with El Centro, Kobe, Northridge and S_Monica earthquake time histories. The peak ground acceleration (PGAs) for the model building is assumed as 0.35g. The Time history analysis for bare frame and the frame with dampers placed in six different configurations were done to find their optimum placing to perform better under earthquake forces. The absolute acceleration (a), displacements (d), inter-storey drifts (dr) produced in all six different model frames with different configurations of lower toggle mechanisms due to earthquake forces are found out. The optimum damper configuration was arrived from the analytical results. The peak average response reduction values for the optimum Lower toggle configuration of viscous dampers in the model frame are found out as 69.0, 59.1 and 68.6 for absolute acceleration, maximum displacements and inter story drifts respectively.

Keywords: Time history analysis, inter-storey drifts, lower toggle, energy dissipation devices.

References:

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Abstract: A quality intensive approach towards construction concreting for the commercial industry is gaining immense importance and it has become the prime duty of every engineer to contribute towards ensuring durability and serviceability of the offered concrete. In this paper, a discussion is presented on a possible way of assuring quality of concrete by implementing six sigma principle to reduce the variability in characteristics among various batches. The methodology of DMAIC (Define-Measure-Analyse-Improve-Control) is applied to the concreting process, considering the Compressive Strength as the Critical to Quality (CTQ) factor. The concrete samples obtained from an RMC were tested for compressive strength at 3, 7 and 28 days, tabulated and analysed for variations. Also, different types of cements used are considered. Sigma levels are identified and suggestions for improving the levels are recommended, which in turn tend to reduce variations and thus streamline the strength values within narrow limits. Control charts as guidelines for further concreting are established.

Keywords: CTQ, DMAIC, DFMO, Sigma Level

References:
1. Nishaant Ha, Swethaa.B, Chris Anto.L

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Authors: J. Premalatha, M. Palanisamy
Paper Title: Performance Evaluation of a Multistorey Steel Frame with Viscous Fluid Dampers in Lower Toggle Configuration

Authors: Nishaant Ha, Swethaa.B, Chris Anto.L
Paper Title: Concreting For Construction- Quality Control by Six Sigma Approach
Authors: Sylviya B, P. Eswaramoothi

Paper Title: Analysis of RCC Building with Shear Walls at Various Locations and In Different Seismic Zones

Abstract: Shear walls are the structural systems which counteracts the effect of lateral loads such as wind and earthquake loads acting on a structure. They are usually provided as an encasement for the elevator cores, stairwells etc., thereby resisting the horizontal and vertical forces effectively. In the present study, analysis of RCC building has been carried out by changing the locations of shear walls in the building. Also, the effect of variations in seismic zones as per IS codes has been presented. The seismic analysis performed is linear dynamic response spectrum analysis using the well known analysis and design software ETABS16.2.0. Seismic performance of the building has been investigated based on parameters such as storey drift, base shear and storey displacements.

Keywords: ETABS, Asymmetric building, Shear walls, Response spectrum, seismic zones.

References:

Authors: V.G. Kalpana, Aravind B, P. Eswaramoothi

Paper Title: Use of Kadappa Waste as a Resource Material for Building Construction

Abstract: The burnt clay brick is a longstanding building material for house construction. The raw material for the production of burnt clay is top soil which is removed from agricultural land and natural landscapes. This process paves way for the depletion of the soil nutrient content and moisture content as well as destabilizes the soil. Also the emission of greenhouse gases during burning of bricks affects the environment. To evade these problems, researchers attempted to establish an alternative green material named Fly ash bricks which utilizes the waste from thermal plants for its production. In addition to the innovation of fly ash bricks, an attempt has been made to utilize the kadappa stone waste as an ingredient in fly ash bricks for construction works. This study focuses on the effect on utilization of kadappa waste as an ingredient for manufacturing a building material. Experimental work is carried out on kadappa fly-ash bricks comprised of different proportions of kadappa stone waste, fly-ash and lime and the comparative study is made to find the optimum mix proportion.

Keywords: Kadappa waste; Fly Ash; Lime; Kadappa Fly - ash bricks.

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6. M. C. Nataraja and Lelin Das, “A study on the strength properties of pave material. Experimental work is carried out on kadappa fly-ash bricks comprised of different proportions of kadappa stone waste, fly-ash and lime and the comparative study is made to find the optimum mix proportion.

Authors: Gowri Shankar M, Nagarajan V, Eswaramoorthi P, Karthik Prabhu T

Paper Title: Performance Assessment and Cost Effectiveness in Replacement of Aggregates with Construction and Demolition Waste in Concrete

Abstract: The demand for Fine Aggregate and Coarse Aggregate is huge owing to infrastructure developments and also a scarcity of natural resources. On the other spectrum, the quantum of a huge quantity of Construction & Demolition Waste (C & D Waste) generated is increasing every year. Disposing of this C & D waste is a posing a very serious problem as it requires a large amount of space, it affects groundwater and also it is not cost effective in case of dumping (Land Filling). So recycling of such waste by means of Segregation Process and utilizing those materials as Recycled Aggregate (RA) for construction projects is a sustainable alternative that helps in the reduction of overutilization of natural resources. This paper is an experimental investigation by means of Compaction Factor, Compressive Strength, Water Absorption and Workability of Recycled Aggregate Concrete (RAC) and also analyzing the cost to evaluate the effect of replacement of Fine
Aggregate and Coarse Aggregate by C & D Waste. The research has been conducted for M25 mix. The optimum mix 20% of Recycled Fine Aggregate (RFA) and 30% of Recycled Coarse Aggregate (RCA) was chosen as the optimum mix among the 4 different mixes depending on its promising results. As a result of cost analysis, the optimum mix is cost-effective when compared with Natural Aggregate Concrete (NAC).

Keywords: Recycled Fine Aggregate (RFA), Recycled Coarse Aggregate (RCA), Natural Aggregate Concrete (NAC), Recycled Aggregate Concrete (RAC), Cost Analysis.

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Authors: S.Rajalakshmi, Kezia Jobel Selvakumar, J.Sathya Kirubaa, T.R.Lakshmi

Paper Title: A Comparative Study On Compressive Strength of Ordinary Concrete and Concrete Replaced With Ceramic Tiles and Eco Sand

Abstract: Concrete is an essential component in determining the growth of country’s infrastructure. It is a composite material comprising fine aggregate, coarse aggregate and cement. Due to the increasing demands for both fine and coarse aggregate, finding a replacement is essential. Eco sand which is the bi product of cement manufacturing industries is found to be a worthy replacement for fine aggregate. During tile manufacturing process, about 30% of the material are transformed into waste. This waste can be reused by replacing a certain quantity of coarse aggregate in concrete. In this paper, the compressive strength test results of conventional concrete and concrete replaced with M sand, Eco sand and ceramic tiles were compared. It has been identified that the latter is more efficient and leads to sustainable development. In brief, the concrete of M20 grade with replacement is found to attain higher strength than the conventional concrete.

Keywords: ceramic tiles, M sand, Eco sand, compressive strength

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Authors: K. Ramadevi, P. Muthaiyan

Paper Title: Seismic Analysis of Vertical Irregularity Rc Building By Extended N2 Method

Abstract: For the seismic evaluation and design of structures, N2 method of analysis of nonlinear static simplified procedure is adopted. The advancement of N2 procedure is known as extended N2 method and it is made easier to seismic evaluation of irregular structures. A common vertical irregularity found in multi-storied building frames is Asymmetric setback. The present study is made for the G+5 framed Reinforced Cement
Concrete vertical setbacks irregularity building in the seismic zone IV. Analysis of the structure was done by extended N2 method. The seismic parameters in terms of displacements and storey drifts was obtained for the G+5 framed building by the extended N2 method. In addition to that same structure is analysed by the Non-linear Time History Analysis. The results obtained from extended N2 method and that from non-linear Time History analysis were compared. A model was created using SAP2000 package and analysis of the structure is done.

Keywords: method, Asymmetric setback

References:

Authors: S K Shivaranjani, S Uma Sankari

Paper Title: Efficiency of Polyethylene Non-Woven Fibre Filter for Treating Institutional Waste Water by Membrane Bio Reactor Process

Abstract: Treatment of waste water involves a variety of Advanced Oxidation Process. The most advanced one is Membrane Bio Reactor (MBR). The unique features of MBR are higher order MLSS in the range of 12,000 mg/l and reduces the sludge production. This process is efficient in removing Total Solids in waste water. Due to the fact that the membrane being too costly, an alternative approach was taken which featured Polyethylene Non-woven Fibre Filter that gave promising results. A laboratory scale Membrane reactor is fabricated for treatment of Institutional Waste water. A small scale reactor is formed by scaling with the treatment plant of capacity 3MLD in the ratio 1:4000. The process involves combination of activated sludge process and membrane filtration. The waste water is pumped to the aeration tank by peristaltic pump from the collection tank. The water is filled in the tank by leaving the freeboard space. The air is supplied by reverse process of peristaltic pump for 2.5 hrs (HRT). After the aeration process, the water is passed over the membrane for filtration. The organic impurities which are present in the membrane after treatment are returned to the aeration tank for the next process (3hrs HRT). The process is continued until the maximum removal efficiency is achieved by varying the run time. The BOD and Turbidity is tested for the treated water at various runtime. The Hydraulic Retention Time (HRT) is varied in the range 2.5 - 6 hrs . The maximum BOD removal efficiency obtained was 98% and turbidity removal efficiency was 97% in the 6 hrs HRT. The MBR system offers many benefits, such as higher MLSS rate, exclusion of sedimentation unit, less sludge production compared to Activated Sludge Process. Various studies of MBR technology has compared with conventional activated Sludge process in terms of removal of pollutants from waste water. The drawback of MBR process is high installation and operation cost. Thus an alternative approach of replacing the membrane by Polyethylene non woven fibre membrane is used which gave the promising results.

Keywords: Membrane Bio Reactor, Polyethylene Non-woven Fibre Filter, HRT.

References:

Authors: P. SachinPrabhu, Ha. Nishaant, T. Anand

Paper Title: Behaviour of Self-Compacting Concrete with Cement Replacement Materials

Abstract: Self-compacting concrete is a type of special concrete which do not require vibration for compaction. The self-compacting concrete has a major disadvantage of its cost due to additional usage of chemical admixtures and Portland Cement. The cost of self-compacting concrete can be reduced by replacement of cement by cement replacement materials. In this paper fly ash, wood ash and their combinations are used as cement replacement materials. Fly ash is an mineral admixture that can be used in concrete. The Wood ash containing less Calcium oxide and significant quantity of Silicon dioxide may be used for replacement of cement. The incorporation of these replacement materials reduces the need for viscosity modifying agents. Higher durability and greater mechanical integrity can be achieved by lowering the water content in the

References:
concrete. Experimental investigations such as split tensile strength, compressive strength, flexural strength of self-compacting concrete containing cement replacement materials are conducted to determine their Mechanical properties. Workability tests (slump, L-box, V-funnel) on the corresponding mix are also used to study the characteristics. The methodology adopted here is the cement replacement materials are replaced 10% and 20% by weight of ordinary Portland cement and the performance is measured. To improve the workability of the concrete 1.5% of superplasticizer (gluenn B233) by weight of the cement is used as chemical admixture. Guidelines given by EFNARC are followed to design the mix. From this investigation it is observed that the optimum replacement of 10% of wood ash and fly ash in self-compacting concrete increases the compressive strength of the of the concrete mixture.

Keywords: replacement of cement, EFNARC are followed

References:

Authors: Venkateshwaran.A, Nandhini.K, Ponmalar.V

Paper Title: Performance of Self Compacting Concrete Containing Micro-Silica and Steel Fibre

Abstract: Self-compacting concrete (SCC) originated in the late 1980’s by Japanese in order to compensate the shortage of labour. The SCC is a special type of labour-friendly concrete that possess the ability to flow and compact by its self-weight. When properly designed, it could save time, eliminates the need for vibration, better compaction is produced compared to the conventional control mix. SCC contains more of binder content consisting of higher cement content. This cement was replaced by micro-silica at varying percentage and also steel fibres were used to improve the ductile nature. In addition to this, micro-silica have been used to improve the strength and durability of concrete. Addition of silica to a concrete mix alters the cement paste structure. Deriving of calcium-silicate hydrates and less of the weak and easily soluble calcium hydroxides. Due to its smaller particle size distribution, they disperse among and separate the cement particles. In the present study, the different mix ratio using steel fibres, micro-silica has been prepared and the fresh and hardened properties of SCC has been studied.

Keywords: Micro-silica, Steel fibre, SCC, Water absorption.

References:

Authors: Ramprakash K

Paper Title: Design, Analysis and Fabrication of a Microstrip Slot Antenna

Abstract: Antenna technology has come a long way in modern day electronics and communication world: from being a wire to printed technology. Most of the communication advancement is due to the rapid advancement in the field of antenna. High frequency electromagnetic signals are being used for communication and telemetry purposes. In this paper a antenna is designed for working in microwave frequencies The objective of this work is to design and simulate modern day advanced antenna and to obtain a better insight towards the working of an antenna and its characteristics . To keep design minimalistic and fabrication easy,a microstrip slot antenna is chosen.It is low profile simple to design and fabricate. Since microwave frequencies are being used nowadays,it would be apt to learn and analyse how an antenna works in those frequencies .Hence the idea is to
design a microstrip slot antenna of resonant frequency 2.4 GHz on a glass/FR4 substrate of 100mm, having a slot length 43mm and a slot width 1mm, with a microstrip line feed and stub matching, analyse and study about its characteristics, fabricate the design and test to see its conformance.

**Keywords:** Microstrip antenna, slot antenna, complementary antenna, patch antenna

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**Authors:** Ramprakash K, Loshni T, Aparna A P

**Paper Title:** Design, Simulate Analyze the Performance of Parallel Coupled Micro Strip Band Pass Filter at 1.5 GHz for GPS Applications

**Abstract:** In this trending generation, world is mainly focusing on system miniaturization, without affecting the performance. GPS(Global Positioning System ) is a satellite navigation system, used to determine the ground position. Radio Frequency (RF) filters used in this GPS receiver should be in compact size. One of the RF transmission line structure is micro strip line structure, and it is the most preferable one because of its low cost, compact size, less weight etc. In this work, a small sized parallel coupled microstrip band pass filter was designed with the frequency of 1.5GHz lies in the L band and 200MHz frequency band. The simulation was carried out by using the software, Advanced Design System 2016 (ADS). Easily available and cost effective Fire Retardant 4 substrate with the dielectric constant of 4.4 was used to design the filter. The designed filter meets the required insertion and return loss values.

**Keywords:** Parallel coupled microstrip line structure, Band pass filter, GPS, FR4, ADS 2010.

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**Authors:** Aparna A.P, Loshni T, K.Ramprakash

**Paper Title:** Interdigital Bandpass Filter for 2.5 GHz LTE Application: Design and Performance Analysis
Abstract: Microwave filter is an indispensable component in all types of communication systems. The most desired features for filters thus designed are accuracy and satisfying degree of performance. The objective of this paper is to design an Interdigital Bandpass filter operating at a frequency of 2.5 GHz. This filter is therefore, suitable for LTE (Long Term Evolution) systems. The implementation of the filter is done using FR4 substrate and the simulation of the filter is done using Keysight ADS (Advanced Design System) software. Parameters such as insertion loss, returnloss and 3-dB bandwidth are measured for analyzing the performance of the filter.

Keywords: LTE, Keysight ADS, Interdigital, Microwave filter.

References:
1. The analysis of the designed filter is done and the measured insertion loss and return loss are represented in the Fig. 3. The graph is plotted with Gain on the Y-axis in dB while frequency is represented on the X-axis in GHz. The S-parameter S21 is used for representing insertion loss whereas S11 is depicting return loss.
11. Pranar Öztürk Özdemir and Gülten Balasu Fırat Ceyhun

Authors: S. Arun Kumar, S. Sasikala

Paper Title: Towards Enhancing the Performance of a Stress Detection System

Abstract: Stress has now become a ubiquitous part of the fast-moving life, due to which many people are affected. Stress, is identified by physical signs of tension, like irritation, anger, nervousness and sadness at an exceeding level. A stressed individual has an abnormal heart rate, blood pressure and breathing. This may cause major variations in mood, productive lifestyle, and quality of life. This work concentrates on detecting the stress of a person by using the time series analysis of Electromyogram (EMG), Galvanic Skin Response (GSR), Heart Rate Variability (HRV) and Respiration rate. The performance of a stress detection system using Support Vector Machine classifier. The Performance of the proposed system is measured using metrics like accuracy, sensitivity and specificity. A significant improvement in the metrics of the proposed system claims that this method will aid in diagnosing the stress rate of a person and afterward necessary steps required to reduce the stress of thebeing.

Keywords: Stress, Physiological signals, time-series analysis, feature transformation, feature reduction, intelligent system, wearable devices

References:

71.

376-378

379-383


Authors: M.Bharathi, A.Amsveneni, B. Manikanandan

Paper Title: Speed Breaker Detection Using GLCM Features

Abstract: Road accidents are increasing worldwide, that leads to death, injuries and vehicle damages. Most of the accidents happen due to the improper warning sign and unnoticeable speed breakers on the road especially during night. Identification and notification of road signs and speed breakers to the driver at proper time is very important to avoid accidents. In this paper, speed breaker identification using Gray Level Co-occurrence Matrix (GLCM) features is proposed. This method has three stages namely pre-processing, feature extraction and classification. Noise removal, Resizing the image and gray scale conversion has been done as a part of pre-processing. In the feature extraction step, the spatial relationship between the pixels is obtained. GLCM features are the second order statistical features of the image. These features includes correlation, Angular Second Moment, Entropy, Homogeneity and contrast. In this paper, features are consider as the shape, texture and feature statistics. Neural Network based classifier is used in the third stage to identify the presence of speed breaker. The performance of the classifier is evaluated by calculating the confusion matrix.

Keywords: speed breaker, image processing, GLCM, feature extraction.

References:


This paper presents an automated testing of Brake ECU (Electronic Control Unit) – ESP (Electronic Stability Program) communication using canoe tool. Today the number of ECU’s in a car is getting more and more. Besides inner ECU to ECU communication, vehicle to vehicle communication is necessary for the efficient way of vehicular communication. The vehicular communication must be highly responsive and accurate. So ECU testing is compulsory to ensure the efficiency and safety of a vehicle. Testing of an ECU in all aspects like mapping and monitoring of the inputs and outputs with other ECU’s is important. During testing the simulation of all loads and sensors associated with that ECU must be ensured perfectly. Manual testing of these ECU with all these necessary condition is a time consuming process. Vector Tool (VT) help in this need of automated communication testing of an ECU. ECU inputs and outputs for functionality related testing with CANoe is done through the VT. Other ECU’s in a car can be simulated using CANoe while testing ECU is compatible for all development stages, due to its high scalability and flexibility. CANoe testing provides high accuracy, reusability and easy way of testing. This total environment is called as Office Test Bench (OTB) where all these vector CANoe box, power supply, ECU, application container (software build), continuous Test framework, master PC (where CANoe software is installed) all are embedded. This setup makes user to test ECU’s very easily and effectively. Basic tests like validation of diagnostic services can be generated automatically in the test configuration tool while complex testing requires manual generation of test cases using script. The test environment is then run on the ECU and a test report is generated for analysis. The test environment is then delivered to a Continuous testing (CT) server and executed on a Continuous test bench (CTB) for every software build. Test reports are stored back in CT server and can be customized to trigger mail at test failure.

**Keywords:** ECU (Electronic Control Unit), CANoe, OTB (Office Test Bench), AUTOSAR (Automated Open System Architecture), CTB (Continuous Test Bench), CT (Continuous Test)

**References:**


Abstract: The smart glove to monitor the Parkinson’s patients is an efficient system to monitor the tremors and harshness levels of that patient. Parkinson disease (PD) patients hurt from a resting tremor, severity, bodykinesia, gait difficulty and postural instability. Common method of evaluating the symptoms however, confide thickly on patient self-accessing, which frequently fail to contribute the essential details. Wearable accelerometer is a major tool which can identify and justly define the movement anomalies in patient’s atmosphere as well as in the clinical setting. This model is unified into a smart glove where these accelerometers are embedded to record the movements and tremors to estimate the cardinal motor symptoms of PD (tremor and rigidity of hand and arm). The gloves are related to smart phones, which proceeds the information and transfer it to the neurologists in their offices. Moreover, the system helps the doctors to control the treatment plan of the patient every day, assuring that medication is working perfectly and eradicating the obligation for patients to make stressful clinical visits regularly.

Keywords: smart glove, parkinson disease, symptoms, wearable accelerometers, Tremor level detection.

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Authors: Amsaveni, M. Bharathi, P.J.Phavithra

Paper Title: Gain Enhancement of a Square patch antenna using EBG Structure

Abstract: In this research work, the gain of a square shaped microstrip antenna has been enhanced using an electromagnetic bandgap (EBG). The dimension of the proposed antenna is 57x57x1.6 mm3. The proposed square patch antenna is simulated using commercially available FR4 substrate whose dielectric constant is about 4.7. The proposed antenna resonates at ISM band of 2.45 GHz. The antenna is powered by 50Ω transmission line using the microstrip feedline structure. The gain of this antenna is improved by 3.5 dB from that of a conventional antenna. The antenna parameters such as radiation pattern, return loss, VSWR and gain have been evaluated. The antenna is designed and simulated on Computer Simulation Technology (CST) microwave studio.

Keywords: Square patch, Electromagnetic Bandgap, microstrip feedline, Gain.

References:


Authors: R.S.Sandhya Devi, Vijaykumar VR, M.Muthumeena

Paper Title: Waste Segregation Using Deep Learning Algorithm

Abstract: In 2017, India is in 177th position of the Green ranking in World Economic Forum. Due to poor handling of air pollution and waste management, India has moved from 141st position to 177th position. With the emerging smart city development across the cities in India, Smart Garbage Management system is the need of the hour. It is estimated that the generated waste is more than 2.0 billion tones. The existing way of garbage management system in India involves waste collection from homes and industries and dumping into dump yards. The segregation of solid waste is completely done by manual laborers which is less efficient, time-consuming and not completely feasible due to large amount of waste. This paper proposes an automated waste classification system using Convolution Neural Network (CNN) algorithm, a Deep Learning based image classification model used to classify objects into bio and non-biodegradable, based on the object recognition accuracy in real-time. This algorithm is suitable for a large amount of waste segregation process. Python index package of spyder is used to identify and classify the waste material in real-time through webcam. In this paper, the first phase of the waste segregation process is carried out where initially the system is able to detect the relative match percentage of each object. Open source software libraries such as TensorFlow and Spyder is used for this process.

Keywords: Convolution Neural Network, Tensorflow, waste segregation.

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Authors: Dinesh Kumar K, Karunamoorthy, Rani Thottungal

Paper Title: Real Time Monitoring System: Implementation of Face Detection and Recognition Algorithm

Abstract: Face detection and recognition is used in biometric applications to identify the faces in real time. It is compare with the stored database. The objective of this paper is to develop a simulation model. To create a real time hardware monitoring system. It also based on an FPGA platform. The canny edge detection algorithm is used to detect the face edges in real time. The MATLAB used for simulation. The hardware platform can be developed based on altera DE-1 SoC development board. An Personal computer monitor and 5 mega pixel TRDB-D5M CMOS camera also used for hardware setup. Verilog HDL used for the programming. The hardware implementation was also based on the Quartus Prime Lite Edison. The canny edge detection algorithm also used here. The alarm system depends on end result of the system.

Keywords: Quartzus Prime, FPGA, edge detection, image processing, Open Computer Vision, TRDB-D5M camera and DE1-SoC board.

References:
titles of the Graduate.


33. Study and Comparison of Various Image Edge Detection Techniques, Raman Maini


Authors: Karunamoorthy B, Ramprabu J

Paper Title: A Novel Method Of real Time Cloth Size Measurement Algorithm Based On Fpga Platform

Abstract: Measurements are the very important parameter in all fields like automobile, textile, farming, construction, etc... This paper present a technique of involuntarily measuring sizes of a garment from a particular picture. The main objective of this paper is to develop real time hardware measurement system based on Field Programmable Gate Array for high accuracy and simulation method using edge and contour detection technique. The simulation can be done by using OPEN CV and hardware platform is based on Xilinx PYNQ-Z1 board which has a combination of ARM Cortex A9 dual processor with an FPGA logic blocks and Logitech C270 USB camera. In this study, we positioned a camera to capture images of tiled cloths of any color and style. Image recognition technique used to propose an automatic cloth measurement. A pattern is introduced to identify the garment along with its size measurements. The pattern can be chosen depending upon the contour area of given cloths. The system provides an effective tool to measure the cloth size. Using this tool we can provide the best performance outcome to the apparel industry.

Keywords: Image Processing, contour detection, Open Computer Vision, Python, FPGA, Xilinx PYNQ-Z1 board, Logitech C270 USB camera, cloth measurement, PC monitor.

References:
3. Study and Comparison of Various Image Edge Detection Techniques, Raman Maini

Authors: R. Kavitha, Niranjana C

Paper Title: Smart Health Care Monitoring System

Abstract: Health care sensor plays a vital role in hospitals to monitor the patient’s health with the progress in health care...
technology. In the proposed technology temperature sensor, heartbeat sensor, blood pressure sensor and glucose sensor are integrated in single module to monitor the patient’s health constantly. This also eliminates the manual procedure of thermometers and other devices for monitoring the health condition. This project deals with the microcontroller based monitoring system for heart rate, body temperature, sugar level, blood pressure and communication of monitored parameters through BLUETOOTH. The threshold value for the project is 20 to 120 pulses per minute for heartbeat, 18°C to 38°C for monitoring temperature, 120/80 for blood pressure and 70/120 for glucose. The Heart Rate, Body Temperature, sugar level and pressure level is transferred wirelessly to the doctor through GSM technique. The sensors monitor the parameters and transfer it through GSM Modem on the similar frequency at which cell phones work.

Keywords: IRD, GSM, Threshold value

References:

Authors: K.Premalatha , J.J.Nandhini

Paper Title: Safeguarding Two Wheeler User’s Lives Using Smart Helmet

Abstract: This paper proposes smart helmet for two wheeler riders. The smart helmet consists of two modules one is the helmet module and other one is engine module. The helmet module has inbuilt alcohol sensor, vibration sensor, a limit switch. These sensors communicate wirelessly with the two wheeler module of the two wheeler through RF transmitter. GPS and GSM system are kept closer to the engine. The engine module receives the information from helmet module through RF receiver. The spark plug is shorted to ground with the help of relay, which is connected to the controller. The relay senses and releases the spark plug from ground unless the signal comes from the controller. The proposed smart helmet doesn’t allow the vehicle to start unless the rider wears his/ her helmet. The proposed smart helmet also detects accidents and inform to the ambulance service through Global Positioning System (GPS) and Global System for Mobile communication (GSM). The smart helmet is developed and tested for various conditions such as two wheeler key not detected, Helmet not worn by the driver, alcohol is detected from the driver and when an accident occurs.

Keywords: Smart Helmet, PIC, Accident Prevention

References:
2. Manjesh N, Prof. Sudarshan raju C H, Safety measures for “Two wheelers by Smart Helmet and Four wheelers by vehicular Communication” ECEDSC, JNTUA, Hindupur.

Authors: MdTaquiddin, S. LakshmiShireenBanu

Paper Title: Efficiency of lateral system in tall RC building

Abstract: Shear walls have the important properties of lateral resistance in high rise building for earthquake and wind load forces. The sway developed by the lateral forces causes damage to the life and property. Thus, shear walls are initiated in the building to achieve necessary resistance to the lateral forces. Double core shear wall or box section shear wall is important to ensure adequate stiffness, strength and durability. The study has been done to analyze the affect of perimeter frames for structural systems in lateral performance of an irregular shape 30 storey ‘L-shape’ building for the subsequent cases 1: 125mm flat slab with drop, 2: 150mm flat slab
without drop, 3: increase in diaphragm’s rigidity with 250mm at regular intervals, 4: outrigger + increase in diaphragm’s rigidity with 250mm at regular intervals.

Keywords: Thus, shear walls are initiated in the building to achieve necessary resistance to the lateral forces.

References:
3. PankajAgarwall & Mansh Shrikhande (2009)“Earthquake Resistant Design of Structures”.

Authors: S. Dhanalakshmi, B. G. Obula Reddy, K. Yogitha Lakshmi

Paper Title: Building a blockchain approach with hyperledger transaction flow and distributed consensus algorithms

Abstract: Blockchain is an important, emerging technology and specifying lot of possibilities, its very much trending topic in recent years. Bitcon is well known implementation of block chain technology, in cryptocurrency has turned the recognition of the universe towards a unique technology. Its benefit as decentralized, persistence and consistency of sharing the informations, blockchain is a distributed ledger that can record transactions efficiently verifiable and permanent way between two parties. Blockchain technologies focus on various applications perspectives and discuss the new technological challenges in confidentiality, integrity, authentication, internet of things and smart contract etc. it can be used to record the peer to peer network with public or private key pair of transactions, authors signed the transactions to be verified by key pair, save the transactions in blockchain network, once the transaction verified it cannot be altered subsequently. This paper present and focus on various techniques of hyperledger fabric systems architecture, transaction flow, membership and identity management, then understanding of hyperledger fabric with consensus algorithms. Hyperledger is one of the fastest growing open-source blockchain, it can dozens of company working together, building a blockchain fabric that can support the framework to test the interaction between application and secure block chain networks, that require every peer to execute every transaction maintain a ledger and run consensus, does not support private blockchain and confidentiality. The first block chain systems run on distributed applications with multiple programming language.

Keywords: Blockchain, Peer-to-Peer Network, Private-Public Key Pair, Hyperledger Fabric, Consensus Algorithms, Blockchain, Smart Contract

References:
6. Imran Bashir, Mastering Blockchain, Distributed ledgers, decentralization and smart contracts explained, (2017)
Authors: Sanjeeva Polepaka, R. P. Ram Kumar

Paper Title: A Study on Performance Analysis of Multi-Level Feedback Queue Scheduling Approach

Abstract: In CPU scheduling, various algorithms are used to schedule the processes. Few of them are First come first serve (FCFS), Shortest Job First (SJF), Shortest Remaining Time First (SRTF), Priority Scheduling, Round Robin (RR), Multi-Level Queue (MLQ), Multi-Level Feedback Queue (MLFQ) scheduling approaches. This scheduling is used to process the scheduling of operating systems, which is responsible for assigning the CPU time to available processes. To get user interactivity, throughput, real-time responsiveness, and more. The objective of the paper is to present an idea that keeps the CPU in maximum utilization until the process is requesting for an event. When the process is waiting for an event to occur, the CPU is switched between the processes for better utilization by consuming CPU cycles. The paper also addresses the four different approaches and their average waiting time in processing the jobs.

Keywords: CPU Scheduling, Process Scheduling, First come first Serve (FCFS), Shortest Job First (SJF), Shortest Remaining Time First (SRTF), Round Robin(RR), Multilevel Feedback Queue (MLFQ), Waiting Time.

References:

Authors: T. Ramachandran, S. Murugapoorpathi, D. Vasudevan

Paper Title: RSM based Empirical Model for the Performance and Emission Characteristics of ROME Biodiesel

Abstract: In the current scenario, the production of biodiesel for IC engine plays important role due to the undesirable pollution and cost hike of the conventional fuels. In India, milk from the rubber tree (HeveaBrasilienis) is used for the production of elastic materials which are most widely used in engineering applications. But the seed from the rubber tree is kept wasted without any further usage and hence in this research the oil produced from the rubber seed is suggested for effective biodiesel production. The rubber seed oil (RSO) is converted in to usable rubber seed oil methyl ester (ROME) biodiesel using trans-esterification and tested for the characteristics of performance and emission through variable compression ratio (VCR) engine. The detailed set of experiments are conducted in the VCR engine with different biodiesel-diesel ratios to evaluate the BTE, SFC, CO, CO2 and NOx levels of the blends. A mathematical model also developed using Response Surface Method (RSM) for these parameters such that the compression ratio, fuel blend, engine load, and injection pressure are the design variables. The experimental results are used in the RSM to create the mathematical models and the models are checked for the ANOVA and p-test. Finally the models are tested with the new sets of experimental results.

Keywords: ROME, VCR engine, RSM, Emission, biodiesel

References:
<table>
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<th>Authors:</th>
<th>Vishwanath B J, Rex</th>
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<tr>
<td>Paper Title:</td>
<td>Use of Steel Slag as Coarse and Fine Aggregate in Porous Concrete Pavements</td>
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<tr>
<td>Abstract:</td>
<td>Due to increasing demand of raw materials for construction of roads, the environmental eco system is getting imbalanced. Hence there is a need to preserve natural resources by using eco friendly alternative materials. Steel slag is one such alternative material, which is an industrial by product that can be used as an alternative to aggregates in partial replacement in road construction. Slag may be used as both coarse and fine aggregates in cement concrete. Hence in the present study mix design for conventional porous concrete was carried out for different proportion of fine and coarse aggregate (0:100, 10:90, 15:85, 20:80, and 30:70). The optimum dosage of FA:CA for the conventional porous concrete mix, giving high strength with acceptable permeability was fixed i.e 20:80 Then the mix design for porous concrete was carried out for partial replacement coarse and fine aggregates with steel slag in 20:80 mix, i.e Replacing only the coarse aggregate in FA:CA (20:80) mix with the air cooled LD slag in three different proportions such as 10%, 30% and 50% i.e keeping FA-20% constant and replacing coarse aggregate by slag in 80% of CA and Replacing only the fine aggregate in FA:CA (20:80) with the granulated LD slag in three different proportions such as 30%, 60% and 90% i.e keeping CA 80% constant and replacing fine aggregate by slag in 20% FA. Finally the mix design properties in terms of strength and permeability are evaluated for the porous concrete prepared with coarse and fine slag.</td>
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<td>Keywords:</td>
<td>Porous concrete; Air cooled LD slag; Granulated LD slag; Coarse aggregate</td>
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<th>Authors:</th>
<th>B. Kishore, V. Vijaya Kumar</th>
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<td>Paper Title:</td>
<td>Local Texton Centre Symmetric Pattern Matrix (Ltcspm) On Wavelet Domain for Texture Classification</td>
</tr>
<tr>
<td>Abstract:</td>
<td>Due to increasing demand of raw materials for construction of roads, the environmental eco system is getting imbalanced. Hence there is a need to preserve natural resources by using eco friendly alternative materials. Steel slag is one such alternative material, which is an industrial by product that can be used as an alternative to aggregates in partial replacement in road construction. Slag may be used as both coarse and fine aggregates in cement concrete. Hence in the present study mix design for conventional porous concrete was carried out for different proportion of fine and coarse aggregate (0:100, 10:90, 15:85, 20:80, and 30:70). The optimum dosage of FA:CA for the conventional porous concrete mix, giving high strength with acceptable permeability was fixed i.e 20:80 Then the mix design for porous concrete was carried out for partial replacement coarse and fine aggregates with steel slag in 20:80 mix, i.e Replacing only the coarse aggregate in FA:CA (20:80) mix with the air cooled LD slag in three different proportions such as 10%, 30% and 50% i.e keeping FA-20% constant and replacing coarse aggregate by slag in 80% of CA and Replacing only the fine aggregate in FA:CA (20:80) with the granulated LD slag in three different proportions such as 30%, 60% and 90% i.e keeping CA 80% constant and replacing fine aggregate by slag in 20% FA. Finally the mix design properties in terms of strength and permeability are evaluated for the porous concrete prepared with coarse and fine slag.</td>
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**Keywords:** Local binary pattern, GLCM features, classifiers, integrated features, wavelet domain.

**References:**


Authors: Nara Sreekanth , Munaga HM Krishna Prasad
Paper Title: Age Classification Based On Appearance Model Using Local Ternary Direction Pattern Approach
Abstract: The appearance model play a vital role in many applications related to facial images. This paper derives a new approach of appearance model using local ternary derivative patterns on human facial images for
effective age groups classification. In the literature direction patterns are derived with respect to central pixel of the neighborhood. This paper derives ternary direction patters (TDP) between sampling points of the neighborhood with a strong assumption that the relationship between adjacent pixels derive rich information. This paper divides the neighborhood into vertical and horizontal units and derives the TDP and based on the relative frequencies of horizontal and vertical TDP, this paper derives horizontal vertical direction unit matrix (HVDMU). The gray level co-occurrence matrix (GLCM) features are derived on HVDMU for age classification and the experimental results are compared with the existing methods and the results indicate the efficiency of the proposed method over the existing methods.

**Keywords:** neighborhood; vertical-horizontal units; GLCM features; sampling points

**References:**

4. Tan PN, et al. Introduction to Data Mining (First Edn) 2005, Addison Wesley
Abstract: In the existing texton based methods a texton is derived in a grid by a collection of pixels exhibiting exactly the similar grey level values/color/attributes. The disadvantage of this approach is they fail in recognizing textons, whenever a small random noise changes the pixels intensity values slightly. This paper addresses this by deriving a fuzzy similarity 'S' in identification of texton patterns. The proposed Fuzzy similarity Texton Co-occurrence Matrix (FSTCM) framework considers the pixels whose gray level value falls within the fuzzy similarity index value as texton pattern. The FSTCM divides initially the texture image into micro regions of size 2x2, identifies the textons and transforms the texture image into a fuzzy texton image. This paper derives gray level co-occurrence matrix (GLCM) features on FSTCM and the proposed method is tested on five popular texture image databases. The experimental investigation reveals the high performance of the proposed method over the state of art local based and texton based methods.

Keywords: texton, similarity; micro region; GLCM features; random noise.

References:
23. L. Sifre and S. Mallat, “Rotation, scaling and deformation invariant scattering for texture discrimination,” in Computer Vision and...
This paper is based on home based security system. In modern world people are instructed on home automation, but don’t care about home security. Security is much more important than automation of home because it can save life and commodity of the people. This paper proposes two main important aspects. One of the processes is automatic sending of message to home owner with help of GSM when door is open by unauthorized user using PIC microcontroller and next one is surveillance camera usage for home security by raspberrypi-3Raspberry pi used for image processing, image processing can be done only if user can enter wrong password it will indicate to raspberry pi for image processing for finding out the unauthorized person.

Keywords: Home automation, camera, GSM, PIC-microcontroller

References:
1. Prof. R.M.Sahu, AkshayGodase, PramodShinde, ReshmaShinde “Garbage And Street Light Monitoring System Using Internet Of Things”International Journal Of Innovative Research in Electrical, Electronics,Instrumentation and Control Engineeri7ng Vol. 4,
Abstract: Verbs can be divided into two types, transitive and intransitive. A verb can be derived into many forms like complete, incomplete, reflexive, causative, interrogative, passive, negative, etc. in Telugu. Transitive verbs need an object to perform action on it, while intransitive verbs do not need. Between the complete and incomplete verbs, only complete verbs can convey fulfilled or complete meaning of the sentence, while incomplete verbs cannot. Reflexive verbs convey that the action performed is for self. Causative verbs convey that the action is made done. Interrogative verbs are used for inquiry. Passive verbs are object oriented, which emphasize action rather than actor. A verb can be derived into its negative and positive forms. Verbs can again be grouped into regular and irregular type based on the way they form. Various types of complete-verb derivatives of regular and irregular verbs, based on tense/ mood, number, and gender are discussed in detail in this paper. Only complete verbs of Telugu were considered for handling their conjugations in Machine Translation (MT) in this paper.

Keywords: Telugu Conjugations, Conjugation Handling, Machine Translation, Morphological Analysis.

References:

Authors: S. Geetha, L. Prasika
Paper Title: Ground Level Ozone Prediction for Delhi using LSTM-RNN
Abstract: Outdoor air pollutants are bringing adverse effects on the living being health. Air quality is deteriorating due to multi-pollutants such as sulfur dioxide (SO2), Nitrogen dioxide (NO2), Nitrogen oxide (NOx), Ozone (O3), Carbon Monoxide (CO), Particulate Matter 2.5 (PM2.5), Particulate Matter 10 (PM10), etc.
Out of these multi-pollutants, ground level Ozone is creating major health issues in lungs, heart, etc. Ground level Ozone is formed due to reactions between Nitrogen, vehicle emissions, Industrial emissions, and gasoline with the presence of sunlight. Recently, Deep Learning Techniques are applied in all prediction problems. Here, we proposed the Recurrent Neural Network based LSTM prediction model to predict the ground level ozone. The model is created with the historical data collected from various stations in and around Delhi. The model is providing more accuracy to predict the ground level ozone than the state-of-art techniques. The model is evaluated with normalized mean square error and mean absolute error.

**Keywords:** Sulfur dioxide (SO2), Nitrogen dioxide (NO2), Nitrogen oxide (NOx), Ozone (O3), Carbon Monoxide (CO), Particulate Matter 2.5 (PM2.5),

**References:**


7. Anikender Kumar, Pramila Goyal, Forecasting of air quality in Delhi using principal component regression technique, Atmospheric Pollution Research, 436-444, 2011.


**Authors:** Srikant Koniki, D Ravi Prasad

**Paper Title:** A Study on Mechanical Properties of Concrete Reinforced with Hybrid Fibers at a Low Fiber Volume Fractions

**Abstract:** This study is aimed to investigate the effect of fiber hybridization on basic mechanical properties of 30 MPa concrete. Fibers used in the study are Hooked-end steel, polyester and polypropylene. Hybridization was done in two stages, the first stage of the investigation was to develop and study the effect of polyester-polypropylene (Non–metallic) HFRC at a total fiber volume fraction of 0.15%. Further, the investigation was carried out to develop a hybrid fiber reinforced concrete made with metallic (hooked-end Steel) and non-metallic fibers at a total fiber volume fraction of 0.5%. Mechanical properties, namely compressive strength, direct tensile strength and flexural strength were investigated. The results obtained were compared with mono-fiber reinforced concrete and conventional concrete. Significant improvement in direct tensile strength and flexural strength observed with the with the fiber hybridization compared to mono-fiber reinforced concrete and control mix. This may be due to synergic response of different fibers at different scales of cracking at different stress levels in concrete. Superior results were observed at metallic – non-metallic hybridization due to exhibition of synergetic response of fibers by inhibition of crack growth and propagation, at different scales of cracking at different stress levels in concrete.

**Keywords:** Fiber hybridization, concrete, Fibers, compressive strength

**References:**


