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# IJARIIT SPECTRUM







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# Making Artificial Intelligence (AI) and Disrupted Business Intelligence (BI) truly Conversational with Humanity Touch, Automated Descriptions and Talking Bots

Indrasen Poola Industry Consultant

**Abstract:** A confluence of forces has propelled artificial intelligence into the business mainstream. Add it to the growing list of potentially disruptive forces businesses can introduce into their business intelligence programs for commercial benefit with the help of human touch, automated descriptions, and talking bots.

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# **Exploration of Diffusion Welding of AISI 304 Stainless Steel Plates**

G. Ramesh, V. C. Uvaraja, A. Santhosh, J. Yashwanth, S. Karthikeyan Velammal Engineering College, Chennai, Tamil Nadu Bannariamman Institute of Technology, Sathyamangalam, Erode, Tamil Nadu

**Abstract:** Diffusion bonding method is an alternate method to join similar and dissimilar materials with minimum dimensional tolerance. It is one of solid state process in which two metallic surfaces are made to contact at the elevated temperature and pressure. Diffusion bonding process provides elevated quality joints without post weld machining. The main process parameters of diffusion bonding include temperature, pressure and holding time. In diffusion bonding technique microstructural changes were fashioned in the base metal which determines the mechanical properties of the bond at the boundary. Diffusion bonding method can be used to weld the dissimilar materials with different chemical and mechanical properties. The present work determines the control of process parameters on diffusion bonded joints of AISI 304 stainless steel plates. Experimental investigation on the microhardness, lap shear test were made for diffusion bonded couples and outcome are summarized.

#### **Operations Research in Logistics**

Krunal Rindani, Jayash Agarwal, Kunal Deshpande, Manan Dewan, Manya Mehan NMIMS, Mumbai

**Abstract:** This study discusses the current scenario of Operations Research in the field of Logistics. Five sectors are considered in the study to form a brief understanding of how they use Operations Research techniques and why these techniques are useful.

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# A Review Report on the Distribution of Insurance in Bank

Ashok Kumar Sahoo Gangadhar Meher University, Sambalpur, Odisha

**Abstract:** This report deals with review of empirical studies related to perceptions towards distribution of insurance channels in banks. This review has been undertaken to observe the areas of distribution of insurance channels in banks which has been explored and which need further investigation in order to formulate objectives and undertake productive research. This review also has been undertaken to unveil the problem areas related to perceptions towards distribution channels as well as to study current status of life insurers and challenges faced by them. Besides, studies would provide an insight into the various efforts directed towards better understanding of the complexities of framing distribution strategies of life insurance companies.

# Performance of Mixing Efficiency and RTD of Static Mixer in Liquid-Liquid and Gas-Liquid Mixture

Vishal Pralhad Bhaskar, S. T. Patil Tatyasaheb Kore College of Engineering & Technology, Warananagar, Kolhapur, Maharashtra

**Abstract:** Abstract- In this experimental work, the mixing efficiencies of immiscible fluids were studied with finding out the mixing index of the fluids at the different velocities and with different Reynolds's number. For finding the efficiencies of the immiscible fluids the pressure drop acts as an important role so as the pressure drop increases then the mixing efficiency of fluids increases. Also, pressure drop directly effects on to know the increasing the mixing efficiency. Also, residence time distribution is the key factor which is found in the mixing of the immiscible fluids in the static mixer which shows the time which remains in the static mixer to pass out the solution which is also important for the calculating the mixing efficiency of the fluids. The objective of the study is to design the static mixer for estimating the maximum mixing efficiency of immiscible fluids.

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# Reduction of VR Using Pi and FLC in a Buck-Boost Converter by Combining SR Buck – KY Boost Converter

S. Radhika, R. Rajalakshmi, D. Venkatesan CK College Of Engineering and Technology, Cuddalore, Tamil Nadu

**Abstract:** In this paper, an analyze and describe step by step process of designing, feedback control and MATLAB simulation of a voltage bucking-boosting converter by combining KY and Synchronous Buck converter for power battery applications. Unlike the traditional buck-boost converter [1, 2, 10, 11], this converter has only the positive output voltage, different from the negative output voltage of the traditional inverting buck-boost converter. This converter operates only in continuous conduction mode. The output current is the non-pulsating waveform thereby not only the current stress on the output capacitor is reduced but also reducing the output voltage ripples. By Combining the KY converter with the synchronous buck converter, a positive buck-boost converter is obtained and uses the same power switches with no right-half-plane zero. So that the circuit is made to be compact and the corresponding cost to below.

# A Hybrid Approach to Detect and Recognise Faces in Complex Background

Shubham Srivastav, Shyam Shankar Dwivedi Rameshwaram Institute of Education & Training, Lucknow, Uttar Pradesh RITM, Lucknow, Uttar Pradesh

**Abstract:** Face recognition from image or video is a popular topic in biometrics research. In this research work a new hybrid approach to detect and recognize faces is proposed and implemented. The proposed algorithm uses Viola Jones method to detect face area from a complex background and then uses the same image to create a database of images. In the recognition part, it again detects the face area and computes the Euclidean Distance of the current face with that of the face images in the training database. The minimum Euclidean distance parameter is used to recognize the correct face, if it is available in the database. The algorithm shows good results in terms of recognition rate as compared to some previous research work in similar field.

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#### **Res Judicata**

Revathi N. S Sundar Reva University, Kerala

**Abstract:** My research is all about the topic Res Judicata which comes under section 11 of civil procedure code 1908. The main purpose of my study is to give a brief summary on the topics for easy reference. I mainly concentrated on the impact, doctine, scope nature, application and non applications of res judicata.

# Persuade of Development Parameters on Diffusion Coupled Joints of Dissimilar Materials – An Analysis

G. Ramesh, V. C. Uvaraja, R. Santhosh Raj, A. Santhosh, K. R. Suraj Velammal Engineering College, Chennai, Tamil Nadu Bannari Amman Institute of Technology, Sathyamangalam, Erode, Tamil Nadu

**Abstract:** Diffusion bonding method is an alternate technique to join like and unlike materials with minimum dimensional tolerance. It is the solid-state process in which two metallic surfaces are made to contact at the elevated temperature and pressure. Diffusion bonding process provides high eminence joints without post-weld machining. The main process parameters of diffusion bonding embrace temperature, pressure and holding time. It is significant that the metallic surfaces should be spotless and free from oxides and nonmetallic films. In diffusion bonding technique microstructural changes were formed in the base metal which determines the mechanical properties of the bond at the interface. Diffusion bonding method can be used to weld the dissimilar materials with different chemical and mechanical properties. The present work reviews the influence of process parameters on diffusion bonded joints of dissimilar materials in the midst of and with no interlayer. Examination on the microhardness, lap shear and microstructure were made for various dissimilar diffusion bonded joints and finally some general conclusions are summarized.

# A Study on Sleep Deprivation in Young Adults

Dr. Amitabh Kishor Dwivedi Maharaj Vinayak Global University

**Abstract:** Sleep deprivation is the condition of not having enough sleep and plays an important role in thinking and learning. Lack of sleep and sleep disorders can contribute to the symptoms of depression. Sleep loss also causes the body to release too little human growth hormone. According to a study, those who had cut their sleep from seven to five hours a night nearly doubled their risk of death from all causes. Present paper emphasizes on the study of symptoms and effects of sleep deprivation in young adults. The aim of the study was to examine the effects which the most frequent sleep disorders have on adults' health, knowing that at least 30% of the population suffers from some sort of sleep disturbance.

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# Access, Use and Level of Satisfaction of Availability of Electronic Resources by the Students of Kuppam Engineering College, Kuppam Chittoor District, Andhra Pradesh – A Case Study

M. N. Mythili Rajyalakshmi, Dr. M. Anjaiah Dravidian University, Kuppam, Chittoor District, Andhra Pradesh

**Abstract:** The present study highlights on the use and satisfaction of availability of electronic resources in the library by the B.Tech., students of Kuppam Engineering College, Kuppam, Chittoor District, Andhra Pradesh. A majority of respondents 64 percent are female students. A majority of the respondents 170 (68%) are visiting the Library daily. A majority of the respondents 27 percent preferred to use electronic resources. A majority of 32 percent of respondents spend 4-10 hours. A majority of respondents 37 percent prefer library as the place to accessing the electronic resources. A majority of the respondents 33 percent used to read e-journals. A majority of 40 percent of respondents satisfied with the available electronic resources in the library between 76%-100%. On the whole, a large majority of the respondents were using the library. It is a good sign.

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# **Implementation of Matrix Converter Using Induction Heater**

R. Pradeep, Dr. S. Mahendran Velalar College of Engineering and Technology, Erode, Tamil Nadu K S Rangasamy College of Technology, Tiruchengode, Tamil Nadu

**Abstract:** This paper suggests the single phase matrix converter (SPMC) high frequency induction heating with improved performance and superior sinusoidal output waveforms are obtained. The converter can buck and boost with step-changed frequency, and both the frequency and the voltage can be stepped up or stepped down. In this paper we have designed a matrix converter that works on three different frequency levels. Any one of these frequencies depending upon the load that is used there by providing us with ease of operation for various loads. With further developments in the single phase matrix converter the industries will be capable of using this matrix converter for their high frequency applications. The simulation results are used to verify the converter can produce an output voltage with three different frequencies 100, 50, and 25 Hz, and that the amplitude of the output voltage can be bucked and boosted. If the output that can be obtained from this matrix converter is improved large power can be saved by the industries. This can reduce the overall consumption of power by the industries and can produce a solution to the huge crisis of power that our nation will be facing in the near future. In future this technique is used to conserve the electrical power in induction heating for melting the metal in industries and home applications.

# **Human Rights and Terrorism: A Psycho-Social Perspective**

Dr. Sonia Shali Unitedworld School of Law, Karnavati University, Ahmedabad, Gujarat

**Abstract:** This chapter discusses the relationship of Human rights and terrorism as one of the most important issues in contemporary human rights jurisprudence. This is an area that needs both political as well as psycho-social attention. Every human being on this universe is entitled for human rights on the basis of simple characteristic of human being and the same perception has also been recognized under the framework of International law. Human rights, as defined in the Universal Declaration of Human Rights, United Nations (UDHR) are the rights inherent to all human beings irrespective of our nationality, place of residence, sex, colour and religion we belong to, language/languages we speak or any other status. (Un.org/universal Declaration\_1) These are the universal values and legal assurances that protect individuals and groups against actions and omissions primarily by State agents that interfere with fundamental freedoms, entitlements and human dignity.

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# To Evaluate the Association between Cranial Base Angle and Malocclusions in Saggital Plane

Mariya Qadir Government Dental College and Hospital Srinagar, Kashmir, J & K

**Abstract:** Position of jaws is influenced by cranial base as evidenced by literature. Various authors have suggested that displacement and growth of cranial base influences position of jaws. Materials and methods: Lateral cephalograms of 90 patients were taken and a study was undertaken to examine the effect of cranial base on malocclusion and the effect of different methods of sample grouping on results. Results: Based on first method of sample grouping, a significant relation was observed between cranial base angle and malocclusion and opposite result was observed when following second method of sample grouping. Conclusion: The method according to which sample is grouped is an important factor in determining the results of the study. In the present study it had a significant influence on results of the study.

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Narmada Bachao Andolan

#### Daine Seirra Jacob Reva University, Bangalore Karnataka

**Abstract:** My paper is all about the all time controversial social issue " The Narmada Bachao Andolan". It contains the whole analysis of the issue and what all happened from the beginning to the end. It has an introduction, important happenings in the Narmada Valley, writ petition filed in court, decision of the court, current status, achievements, and a conclusion on Narmada Bachao Andolan.

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# **Power Quality Issues Mitigation by Using DSTATCOM**

Megha Bhikaji Misal, Gauri. M. Karve Pune Vidhyarthi Griha's College of Engineering and Technology, Pune, Maharashtra

**Abstract:** In this paper, the role of FACTS (Flexible AC Transmission System) devices in addressing various power quality issues has been studied. In FACTS, power electronic devices and their switching control schemes are used for improving the power flow in the transmission network and hence improve the power quality and reliability of the low-voltage distribution network. These devices can play a significant role in maximizing the power transmission capability of the transmission network and providing high power quality at the point of common coupling (PCC) of the distribution system. The Distributed Static Compensator or DSTATCOM is a type of FACTS controller and has the function of reactive power compensation and harmonic mitigation. This paper discusses the use of DSTATCOM for mitigation of power quality issues.

# **Relevance of Buddha Teaching in Quality Management**

Nitin Kamble, Swati Suradkar Pune, Maharashtra Kasturi Shikshan Sanstha, Shikrapur, Pune, Maharashtra

**Abstract:** "Buddha" his "Dhamma" have a practical focus on continual improvement in human life. And "sangha" teaches about the importance of communal harmony & balance in human life. The alleviation of sufferings is the first teaching of Buddha, the Four Noble Truths and these noble Truths say that the suffering exists everywhere. This suffering has a reflection of a causal effect in human life & community. Buddha's eightfold path teachings are profound to eliminate the root cause of the sufferings and attainment of continual incremental improvements with the lifelong sustenance throughout the life. How do the Buddha teachings are applied to the business? This is the area of discussion of this article.

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# **Design and Analysis of Air Less Tires**

Dr. R. Ramachandra Sri Krishnadevaraya Engineering College, Gooty, Andhra Pradesh

**Abstract:** Abstract The airless tire is a solitary unit supplanting the pneumatic tire, in get assembly. It replaces every one of the segments of a regular outspread tire and is comprised of an unbending center point, associated with a shear band by methods for adaptable, deformable polyurethane spokes a nd a tread band, all working as a solitary unit. The Tweel, a sort of airless tire, however discovers its non specific application in military and earth moving applicant particles because of its level confirmation configuration can be render the pneumatic tire out of date in do mastic autos. Our project includes outline and investigation of an airless tire for do mastic autos; this will be followed by an anxiety examination contemplate. The model will be do in Pro E and investigation will do in Ansys.

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An Investigation on the Mechanical Properties of Die Cast Zn-Al Alloy Reinforced with Boron Carbide

Nikhil V. S, Anirudh Attuvallil Rajiv Gandhi Institute of Technology, Mumbai, Maharashtra Amrita School Of Engineering Coimbatore, Tamil Nadu

**Abstract:** The objective of the project is to develop Zn-Al alloy without reinforcement and as well as with reinforcements and to analyse the microstructure and find the mechanical properties such as hardness, tensile strength and %elongation of both the cases. Apart from above objective a study is to be conducted to understand the effect of reinforcement on mechanical properties like hardness, tensile strength and %elongation of Zn-Al alloy under different reinforcement compositions. These properties of Zn-Al alloy will be found out at different compositions of reinforcement by keeping the casting temperature constant at 780 ° C

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# **Impact and Non-implementation of CSR in Liquor Industries**

Vaishali Sharma ITM University, Raipur, Chhattisgarh

**Abstract:** This research focuses on implementation of Corporate Social Responsibility on liquor industries. There are many loopholes in its implementation as the sector has been a topic of debate in the past decades due to its bad impact on society and it is also been a cause of many social harm like drink and driving, accidents, domestic violence, vandalism etc. Various laws and amendments have been made which mandates industries to spend a specific amount on CSR activities, therefore companies are bound to adopt CSR. The question is whether companies which are involved with alcohol policy genuinely perform this social campaigns or they are trying to cope up their negative consequences, and using these social events so that they can boost up the sale of their products. There can be many reasons and benefits which the company can obtain from CSR programs such as good reputation, advantage over competing industries etc. but in what extent the society is getting advantages from this.

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# **A Literature Review on Sentiment Analysis**

#### Venkata Satya Sai Abhishikth Tholana GITAM University, Visakhapatnam, Andhra Pradesh

**Abstract:** Sentiment analysis or Opinion mining is one of the fastest growing fields with its demand and potential benefits increasing every day. With the onset of internet and modern technology there has been a vigorous growth in the amount of data. Each individual is able to express his/her own ideas freely on social media. All of this data can be analyzed and used in order to draw benefits and quality information. One such idea is sentiment analysis, here, the sentiment of the subject is considered and necessary information is drawn out whether it be a product review or his/her opinion on anything materialistic. A few of such applications of sentiment analysis and the method in which they are implemented are explained. Furthermore, the possibility of each of these works to effect any future work is considered and explained along with the analysis as to how the previous problems in the same field have been overcome.

Read Full Paper

# **Cloud Computing**

Pratima Purohit, Thanushree .K, Amulya Ramesh, Mamatha .V BNM Institute of Technology, Bengaluru, Karnataka

**Abstract:** In this Paper we discuss Security issues for Cloud Computing including storage security, data security, and network security and secure virtualization. Cloud computing is an architecture for providing computing service via the internet on demand and pay per use access to a pool of shared resources namely networks, storage, servers, services and applications. This research paper also analyzes the key research and challenges that presents in cloud computing and offers best practices to service providers as well as enterprises hoping to lever age cloud service to improve their bottom line in this severe economic climate.

# **Effectiveness of Play Therapy upon Anxiety among Hospitalised Children**

Bency Davidson, Nesa Sathya Satchi, Dr. Latha Venkatesan Apollo College of Nursing, Chennai, Tamil Naidu

**Abstract:** Hospitalisation to any child is a very unpleasant and traumatic experience. Hospitalised children require more recreational play because, illness and hospitalisation constitute crisis in child's life and since these situations are fraught with overwhelming stresses, children need to play out their fears and anxieties as a means of coping with these stresses. Hence in this study the investigator has tried to determine the effectiveness of play therapy upon anxiety among hospitalised children. Methods A true experimental pretest post test research design was used. The samples for the study were chosen by purposive sampling and the sample size was 30 in experimental group and 30 in control group. Tools such as Demographic variable proforma, Clinical variable proforma and State anxiety inventory scale were used to assess the anxiety of hospitalized children. Results The findings of the study revealed that in control group there was no significant difference in the mean and standard deviation of the anxiety levels (M =49.5, 48.4 & SD =8.30, 8.36) before and after play therapy. Whereas in experimental group significant difference in the mean and standard deviation of anxiety level (M=49, 42.76 & SD = 8.40, 8.29) was noted before and after play therapy at p<0.01. Overall study findings has identified the play therapy is effective in reducing the anxiety among hospitalized children.

# **Adhesion of Fouling Organisms and its Prevention Technique**

Chandrakant Chaudhari, Murlidhar .K Akzonobel Paint India Limited, Bangalore

**Abstract:** Biofouling is the undesirable accumulation of microorganisms, plants, algae and animals on submerged structures especially ship hulls. Biofouling also occurs on the surface of living marine organisms. It is also found on membrane systems such as membrane bioreactors and reverse osmosis spiral wound membranes. The application of TBT and other heavy metal-based antifoulants has created another environmental problem. This review article summarizes the adhesion mechanisms of biofouling organism, type of biofoulers and technique to prevent artificial surfaces from marine fouling organisms. The antifouling methods based on traditional chemical methods, biological methods, and physical methods are discussed. The chemical methods include such as tributyltin self-polishing copolymer base coatings, it having good performance among the other coating but this coatings cause's serious environmental problem. Hence, we focus on other antifouling coatings include coatings with base on copper acrylate, TBT free self-polishing co-polymer coating, Non-toxic antifouling Coating mostly silicon base chemistry, Biological antifouling methods including Enzymes that degrade adhesive used for settlement, Enzyme that disrupt the biofilm matrix, Enzyme that generate deterrents and biocides, Physical methods. In this review paper, most of the focused non-toxic antifouling technologies are discussed. It is concluded that Low Surface Energy Antifouling Coatings, Modified Organic Silicone Anti-fouling Coatings, Modified Organic Fluorine Anti-fouling Coatings, Fluorine Silicone Resin Anti-fouling Coatings because of their excellent effectiveness and low toxicity.

# **Client Server Architecture for IT Company**

Amrutha NT, Dr. N. Revathy Hindustan College of Arts and Science, Kerala

**Abstract:** The client server communication via wired or wireless LAN is an important feature of every company. The project creates an effective file sharing client server application via LAN for an IT company. In modern IT companies have different types of application for communication. The file sharing system and broadcast nature via client server architecture is a tedious one. The project aim to create a new client server communication architecture for IT Company, which helps to send files, message to the department or a single employee.

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# **Performance Estimation of OFDM in Multipath Rayleigh Fading Channel**

Pavan Kumar Tiwari, Arun Kumar Mishra Buddha Institute of Technology, Gorakhpur, Uttar Pradesh

**Abstract:** In recent years high speed wireless data communications have increasingly been used in many application areas like Orthogonal Frequency Division Multiplexing (OFDM) .The principles of OFDM modulation have been in theory from a long time. But in recent years, this technology has crossed the limitations into the real world of modern communication systems to combat Inter Symbol Interference (ISI) through multicarrier modulation. OFDM has proved to be very effective in mitigating adverse multipath effects of a broadband wireless channel. Counteracting the frequency selectivity of multipath channels by multiplexing information on different orthogonal carriers is the key to the OFDM success. In this research work, the aim is to figure out the way, for improving the performance of transmitting information. Various kinds of modulation techniques will be studied in terms of their performance in a virtual Rayleigh Channel environment. The average BER performance for different MPSK and M-QAM will be evaluated and use of gray coded bit mapping for different modulation schemes to get BER performance with OFDM technique The numerical results are computed and plotted for M=16 and 64

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**Design and Analysis of Casted Mecanum Wheel** 

Sushil Lengade, Suraj Shirodkar Jain College Of Engineering, Belagavi, Karnataka

**Abstract:** In this study, an attempt has been made to design and manufacture the mecanum wheels by using aluminium alloys. Sand casting is adopted as the fabrication technique. The study was also extended to understand the load carrying capacity of the mecanum wheel using standard compression test of universal testing machine. It was observed that single wheel can withstand maximum load of 340 Kg. It is also observed the hardness number up to 170 BHN (Brinell hardness number) was achieved through the casted aluminium product.

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# **Electricity Theft in India: Its Measure and Solution**

Malka Tarannum, Durga Sharma, Dr Dharmendra Singh Dr. C. V. Raman University, Kota Bilaspur, Chhattisgarh

**Abstract:** The paper discusses the power theft problem occurring in the Indian scenario and the problems associated with it. The power theft is categorized as the non technical losses.the amount of power theft in India varies with different states. In this paper effect of power theft on distribution of power is analysed. Intensity of usage of tube-wells, linked to unmetered electricity use by farmers increases the power theft.methods of power theft are discussed and various measures to control is discussed in this paper.

# A Survey of Monitoring and Controlling Power Theft Problem in Local Area

Malka Tarannum, Durga Sharma, Dr Dharmendra Singh Dr. C. V. Raman University, Kota Bilaspur, Chhattisgarh

**Abstract:** The paper discusses the distribution structure of Talapara Bilaspur Chattisgarh and how the power theft problem in this area is monitored and controlled. Almost about 7000 houses are located and power theft problem is very popular in this area. Illegal consumption of electricity or electricity theft constitutes a major share of NTL (Non-Technical Losses). This dissertation discusses several methods implemented by illegal consumers for stealing electricity a comprehensive review of the advantages, challenges, and technologies involved in the design, development, and deployment of smart meters is presented and distribution wire of aluminum is replaced by rubber coating and insulating wire. Illegal consumer used a non linear load like cooking heater, water heater, freezer, washing machine, tube light, exhaust fan, CFL etc. The theft of power overloads the distribution system and causes low voltage, voltage dips problem and generate heavy harmonics in power system.

# Financial Promise Keeping and Social Audit Programme under Mahatma Gandhi National Employment Guarantee Scheme (MGNREGS) In Himachal Pradesh

Dr. Arti Pandit Dhawan, Ajay Kumar Himachal Pradesh University, The Mall, Shimla

**Abstract:** Abstract Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is the most significant act in the history Indian polity. In many ways like grassroot level participation of every citizen and beneficiary through democratic process, multilayered social audit, transparency mechanism by involvement of civil society, comprehensive planning at village level towards sustainable and inclusive growth etc. With the implementation of National Rural Employment Guarantee Act (NREGA) which is now MGNREGS, India in 2006 embarked on an ambitious attempt to fight rural poverty by creating a justifiable right to work for adults in all households in rural India. It is vital to emphasize that the future of MGNREGS, which is a legal entitlement for the underprivileged people living in rural areas, which are tied with the working of the Panchayati Raj Institutions in India. The scheme ensures the 100 days of employment to all the households, with equitability of wages to all the workers across genders. The scheme provides for depositing the money directly to the bank accounts of beneficiaries, to minimize the instances of corruption. It further provides for social audit, checking of muster-rolls and stipulated time frame, for the payment of wages. The scheme so far has been guite effective in India, including the state of Himachal Pradesh.

# A Method and a System for Secure Access to a Network Resource

Uma Shankar Gupta, Ram Chander Rohilla Guru Nanak Institute of Management and Technology, Ludhiana PCTE, Ludhiana, Punjab

Abstract: Bank, casino, Defense, Secret Agencies, Homes and ATM Safe is not just a vault. Every individual have believe that their money is completely secure in ATMs and strong rooms. All the banks and casinos protect their safe with their man power and latest technologies. However some masterminds have ability to deceive these systems for stealing money, important data and reputation of that organization get ruin too. The entire organization those related to money wants completely secure their money and data hence no one can Robb their safe. The present invention relates to security of resources such as monetary funds, data stores and document stores etc. and more specifically, to a method and system for secure access to a network resource. Humans are becoming very dependent on the machines and it is correct to do so as the machines are much more reliable from the security point of concern. The advancement of technology has led to increment the use of reliable safety devices. For example, ATMs, banks or any high security zone are somehow or other are managed and controlled by the use of electronically controlled high level security apparatuses. But as technology is evolving, traditional security systems are lagging to provide the required security. So advancement of technology is required so that confidential data or monetary funds can be kept into safer zones.

# **Studies on Strengthening of High Performance Self Compacting Concrete**

R. Karthika, S. Balamurugan N.S.N College of Engineering & Technology, Karur, Tamil Nadu

**Abstract:** Self Compacting Concrete (SCC) has more attention because of its ability to compact without the need of internal or external vibration. The placing of normal conventional concrete is difficult in reinforcement confinement places and also the strength of the concrete is low when it is subjected to severe exposure condition. In order to overcome these effects, the admixtures were used in the concrete to increase the strength and durable properties of the concrete. Self-Compacting Concrete (SCC) is one of the concrete which makes use of admixture to increase the flowability of the concrete without any additional vibration. As the concrete is flowable, it has good workability. SCC has more workability and by the addition of mineral admixtures like fly ash and silica fume, the concrete will attain more strong and durable, so that the concrete will behave as Self Compacting High-Performance Concrete (SCHPC). The aim of the study is to determine the flexural behavior of the self-compacting high-performance concrete. In this present work, the various literature related to SCC with different mineral admixtures was studied and the best among them was chosen for the future work

# A Study on Market Segmentation of Samsung Electronics Ltd. With special References to Mobile Phones

Abhishek Bajaj ITM University Raipur, Chhattisgarh

**Abstract:** Market Segmentation refers to dividing a broad target market into subsets of consumers businesses, or countries that have, or are perceived to have, common needs, interests, and priorities, and then designing and implementing the marketing strategies to target them. Samsung is among the top players when it comes to the mobile phones. It offers a wide range of products for all sections of the society. Its focus is on the middle-class section of the society has given them a stronger footing in the Indian market which is also a reason for its high sales. According to the researcher after seeing the result it was founded that Samsung is highly focused on the middle section of the society and the consumer itself want the mobile phones should be at cheaper rates which suit to their pocket. In this research, the researcher has collected the data from the students and the research is based on the opinion of the students.

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# Vulnerability Assessment of Sensor Network Using Multisink Timestamp and Attack Graph Based Metrics

Ms. Patil Priyanka Nagnath, Prof. Dhainje Prakash B. Shriram Institute of Engineering & Technology, Paniv, Maharashtra

**Abstract:** Attack graph security metrics used for providing the security to the network .We proposed mainly three algorithms those are Shortest path metrics, Number of paths metrics and mean of path length metrics. These three techniques is mostly used for example where the earthquakes or volcanos can occur. In our work we are findings the hotspots areas or sensing the hotspot points from the large geographical areas where the volcanos or earthquakes may be occurred in future and these three algorithms providing the security to that area so that we can avoid the volcanos or earthquakes. But attack graph security metrics used for aggregating the result of those three security metrics and provide the more security.

# A Review on Security to Network using Security Metrics and Multisink Timestamp

Ms. Patil Priyanka Nagnath, Dhainje Prakash B. Shriram Institute of Eng. & Technology, Paniv, Maharashtra

Abstract: The emergence of wireless sensor networks (WSNs) can be considered one of the most important revolutions in the field of information and communications technology (ICT). Recently, there has been a dramatic increase in the use of WSN applications such as surveillance systems, battleground applications, object tracking, habitat monitoring, forest fire detection and patient monitoring. Due to limitations of sensor nodes in terms of energy, storage and computational ability, many security issues have arisen in such applications. As a result, many solutions and approaches have been proposed for different attacks and vulnerabilities to achieve security requirements. This paper surveys different security approaches for WSNs, examining various types of attacks and corresponding techniques for tackling these. We use multisink timestamp and attack graph based metrics. Multsink Timestamp technique finding out the attacking or sensing the attacking points among all networks in small period of time. For e.g. the large geographical areas where the volcanos or earthquakes may be occurred in future and these techniques finding out those areas provides the security to that area so that we can avoid the volcanos or earthquakes. For finding out the attacks in network we usea three methods Normalized Mean of Path Lengths Metric, Standard Deviation of Path Lengths Metric, Mean of Path Lengths Metric. These three metrics creates clusters of all networks and finding out only the attacking networks. The paper suggests an approach to network attack modeling and security evaluation which is realized in advanced Security Information and Event Management (SIEM) systems. It is based on modeling of computer network and malefactors' behaviors, building attack graphs, processing current alerts for real-time adjusting of particular attack graphs, calculating different security metrics and providing security assessment procedures. Increasing inclination of people to use software systems for most of the purposes comes a major challenge for software Engineers the engineering of secure software systems. The concept of computer Security is being heavily researched and this perfectly makes sense in a world where e-commerce and e governance are becoming the norms of the day. Along with their potential for making life easier and smarter for people, these systems also carry with them the danger of insecurity. Because any software system is an outcome of some software engineering process it makes sense to incorporate security considerations during the software engineering processes. We use the attack based graph to provide the security to network. For that purpose we use the shortest path metric, the Number of Paths metric, and the Mean of Path Lengths metric are three attack graph-based security metrics that can extract security relevant information. The metric and the Mean of Path Lengths metric fail in the number of ways an attacker may violate a security policy. The Number of Paths metric fails to adequately account for the attack effort associated with the attack paths. To overcome these shortcomings, we propose a complimentary suite of attack graph-based security metrics and specify an algorithm for combining the usage of these metrics. Attack graph can provide clues for the network defender on how an attacker exploits the vulnerability on the network to achieve goals. System administrators use attack graph to determine how vulnerable their systems and to determine what security measures are used to maintain their systems. In a network of large and complex organizations, securing a network is a very challenging task. Attack graphs are very important in the effort to secure the network, because it can directly indicate the presence of vulnerabilities in network and how attackers use the vulnerabilities to implement an effective attack. In this paper, we will describe some very good algorithms can be used to generate the attack graph.

# **Power Quality Improvement and Harmonic Mitigation by Using D-Statcom**

Soujanya Mekala Jawaharlal Nehru Technological University Hyderabad College of Engineering Jagtial, Telangana

**Abstract:** The main impact in the power distribution system is the quality of power, which causes more distortion in the source due to using nonlinear load. The main cause for distortion is harmonics, and interharmonics. Thus it is necessary to control the harmonics to improve the power quality of the system. There are number of control techniques to improve the power quality with the FACTS devices. In this paper performance of Distribution Static Compensator (D-STAT COM) for Power Quality improvement has been studied. The simulation is done in MATLAB/SIMULINK environment.

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# Passive and Active Technology Used in Zero Energy Building

Deepshikha Bhagat, Ar. Ashish Sharma Amity University, Madhya Pradesh

**Abstract:** Global warming is a major issue facing by the world today and in future. Keeping in mind the end goal to stop or resolve this issue, society must change through learning and being ready of what they use so as to be less destructive in nature. Making building zero vitality would have a more noteworthy effect in settling this issue and making earth more manageable likewise inspire the monetary development. It would not just take care of the issue rather the customer or the client would be profited in different ways, as enhanced personal satisfaction, inhabitant wellbeing, comfort, chop down vitality utilization, spare cash and thus improving the neighborhood biology. The paper goes for giving the different viewpoints and systems by featuring these advantages, and encouraging a development confirm base, henceforth making the world a sheltered and better place to live.

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Isolation and Identification of Bioactive Compound from Bacillus

Megaterium from South East Coastal Region of India against Human Dental

Caries

S. Vijayalakshmi, S. Rajasekar, A. Mohankumar Chikkanna Govt. Arts College, Tiruppur, Tamil Nadu

**Abstract:** Periodically, marine bacteria are producer of secondary metabolites in the harsh ocean. In this present study, a marine bacterium was isolated from marine cone snail in the Gulf of Mannar. The potential isolates was tested for various biochemical test and 16Sr RNA gene sequencing, which leads to their identification as Bacillus megaterium producing antibiotic compound for treating human diseases. Further, the selected isolates were cultured, purified and screened for antimicrobial activity against a battery of decay causing cariogenic pathogen Lactobacillus acidophilus. This pathogen were identified and analysed by Pg and Research Department of Zoology, Division of Microbial Technology, Chikkanna Govt. Arts College, Tirupur, collected from Fenn Dental Clinic in Tirupur District. Among these, 16 isolates exhibited strong bactericidal properties against tested pathogen Lactobacillus acidophilus. One promising strain, designated as MTBMVG07, with strong antimicrobial activity against cariogenic pathogen.

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# **Application of Operations Research in Agriculture**

Aakanksha Bhatt, Aarti Multani, Aditi Agarwal, Aditi Joshi Narsee Monjee Institute of Management Studies, Mumbai

**Abstract:** Application of Operations Research in the field of agriculture has been the theme of the study. Operations Research can be applied to the agricultural sector via day to day decisions such as choosing a feed combination for animals, management of agricultural process right from sowing seed to selling of produce in the market, predicting the risk of nature and safeguarding costs etc. For these applications various techniques come handy, as the purview of the study has to be limited, we have explained 4 major technique that can be used for farm management in order to garner profits and maintain efficiency. The 4 major techniques are; Linear programming, Game theory, Network analysis and Waiting line theory.

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# Assessment of Nitrate Contamination in Ariyalur District, Tamil Nadu (India)

T. Thamilarasan, K. Sankar Tamil University, Thanjavur **Abstract:** Groundwater pollution has been reported in many aquifers because of high concentration of nitrate which is the result of excessive use of fertilizers to crop land. Systematic sampling was done, with a view to understand the source of nitrate concentration . 100 sample sites were selected and the samples were taken for a baseline study to understand the geochemistry of the study area and to assess its physicochemical characteristics. The water quality parameters were investigated for pre-monsoon (January 2011) and were compared with the standard values given by ICMR / WHO. The hydrochemical data of 100 samples indicates that the concentration of almost all parameters fall within the permissible limits expert nitrate. Linear Trend Analysis on seasonal basis clearly depicted that nitrate pollution in the study area is increasing significantly. None of the samples during the samples during pre-monsoon season were showing a high concentration of nitrate, exceeding permissible limits of WHO (50 mg /l), which is due to the use of nitrogenous fertilizer in the study area. Appropriate methods for improving the water quality and its management in the affected area have been suggested.

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# Analysis of FM/FM/1 Queuing System with Pentagon Fuzzy Numbers and using DSW Algorithm

Dr. V. Ashok Kumar Ambo University, Ethiopia

**Abstract:** This paper intends a method to construct the membership functions using DSW algorithms for the performance measures in queuing systems where the arrival rate and service rate are fuzzified. The performance measures of FM/FM/1 are analyzed mathematically using pentagon fuzzy numbers, and by applying DSW (Dong, Shah & Wong) algorithm where the arrival rate and service rate are fuzzy numbers. To determine the validity of the proposed approach numerical example is illustrated.

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# **Partial Replacement of Cement with GGBS in Concrete**

Chalamcharla Venu Gopal, Suresh .A, V. Gokul Nath Saveetha School of Engineering, Saveetha University, Chennai **Abstract:** In this present construction era concrete is the mostly used construction material in the world. Concrete is consumed widely that it is second most consumed material after the water in terms of per-capita consumption. As the pollution is increasing and the environmental sustainability is affected, researchers are seeking for other materials to reduce the consumption of cement. GGBS is one of these supplementary materials used to replace with cement to reduce the consumption of the cement.

#### Effects of Glass Powder and Brick Aggregate in M-25 Concrete

V. Gokulnath, T. Soumith Reddy, Nalamothu Nagachandu Saveetha University, Tamil Nadu

Abstract: Concrete is a mix of bond, sand, coarse total and water. The key factor that increases the value of cement is that it can be intended to withstand harshest situations critical part. Today an unnatural weather change and ecological decimation have turned out to be show hurts as of late, worry about natural issues, and a changeover from the mass-squander, mass utilization, large scale manufacturing society of the past to a zero-radiation society is currently seen as noteworthy. Typically glass does not hurt nature at all since it doesn't radiate contaminations, however it can hurt people and additionally creatures, if not managed precisely and it is less benevolent to condition since it is non-biodegradable. In this way, the improvement of new advancements has been required. The term glass contains a few compound assorted varieties including pop lime silicate glass, salt silicate glass and borosilicate glass. To date, these sorts of glasses glass powder have been broadly utilized as a part of concrete and total blend as pozzolana for common works. The supportable development idea was acquainted due with the developing worry about the eventual fate of our planet since development industry is an immense buyer of normal assets and, at the same time, a waste maker. Concrete blocks industry is viewed as one of the greatest normal asset buyers. In any case, it might be utilized as a potential place for reusing squanders, in view of its composite nature (i.e., bond, water and totals). Totals in strong bond blocks contain around 60–75% of the aggregate volume, so any lessening in characteristic totals' utilization will have huge effects. Reusing of squanders as regular totals is monetarily suitable as well as it is considered as an ecological amicable approach. Mud blocks are generally utilized as a part of Egypt. The amount of stone work annihilation squander is assessed to be around 2–3 and 1.5 times higher in structures with stack bearing workmanship and fortified cement surrounded brick work infill as basic frameworks, individually. As needs be, a critical part of decimation squanders is earth blocks. Also, block fabricating industry creates extensive amounts of rejected let go blocks due to being off-standard (i.e., broken, mutilated, under consumed, or over consumed). The off-standard blocks are sold for arranging purposes, if monetarily possible, yet generally dumped into destinations around the block industrial facilities causing natural issues. Consequently, the reusing of squashed blocks as option totals has a specific enthusiasm as it can impressively lessen the issue of waste stockpiling and then again can help in the conservation of characteristic totals. Besides, concrete containing coarse smashed blocks had a generally bring down quality at early ages than typical total cement. This is because of the higher water ingestion of pounded block totals contrasted with regular totals.

#### **Automated Safety Control Blind Zone Alert System**

Javeed S. K, B. Bhuvaneswari Saveetha School Of Engineering, Chennai

**Abstract:** This paper presents in modern vehicles many number of sensors are used for different applications and also these sensors requirement increases in future, intravehicular wireless sensor networks (IVWSNs) have introduced in the automotive industry. This generation vehicles required advanced technology for controlling vehicle to provide safety and as they will able to reduce the amount of wiring harness inside a vehicle. By avoiding the usage of wires in vehicle, vehicle weight will reduce, then engine performance, fuel economy and reliability will improve. These advantages on an IVWSN is a flexible platform, and these can support other vehicular applications as well. And the implementation of IVWSN system of cheaper when compared to systems that are using cameras, or radars.

### Synchronization of Photovoltaic Systems in Single-Phase Grid-Connected Under Grid Faults

Chinmayee K. S Bangalore College of Engineering and Technology, Bangalore

**Abstract:** The highly increasing penetration of single-phase photovoltaic (PV) systems pushes the grid requirements related to the integration of PV power systems to be updated. These upcoming regulations are expected to direct the grid-connected renewable generators to support the grid operation and stability both under grid faulty conditions and under normal operations. Grid synchronization techniques play an important role in the control of single-phase systems in order to fulfill these demands. Thus, it is necessary to evaluate the behaviors of grid synchronization methods in single phase systems under grid faults. The focus of this paper is put on the benchmarking of synchronization techniques, mainly about phase locked loop (PLL) based methods, in single-phase PV power systems operating under grid faults. Some faulty mode cases are studied at the end of this paper in order to compare these methods. It is concluded that the Enhanced PLL (EPLL) and the Second Order Generalized Integrator based PLL (SOGI-OSG PLL) technique are the most promising candidates for future single-phase PV systems due to their fast adaptive-filtering characteristics.

#### **Fea for WEDM Process of Titanium Alloy**

Pratyush Kumar Singh, Manoj Kumar, Paveen Kumar Maurya Dr. APJ Abdul Kalam Technical University, Lucknow, UP

**Abstract:** Advance non-conventional machining processes are use in modern manufacturing system. In Titanium alloy specimen condition machining process are require maximum energy. Wire electrical discharge machining (WEDM) is widely used in machining of conductive materials when precision is considered as a prime importance. This work proposes a three dimensional finite element model (using ANSYS software) and new approach to predict the temperature distribution at different pulse time as well as stress distribution in non-conventional machining for Titanium Alloy Specimen. A transient thermal analysis assuming a Gaussian distribution heat source with temperature-dependent material properties has been used to investigate the temperature distribution and stress distribution. Thermal stress developed after the end of the spark and residual stress developed after subsequent cooling. The effect on significant machining parameter pulse-on-time has been investigated and found that the peak temperature sharply increases with the parameter.

#### **Experimental Study on Self Compacting Concrete Having Grade M70**

Baravkar Amit Balaso, Chandgude Swapnil .K, Yadav Ranjit .D, Kumukale Shilpa .K, Udage Manisha .E, Prof. Ingale Sujata SVPM COE Malegaon, Baramati

**Abstract:** Self compacting concrete (SCC) is a new category of high performance concrete which flows under its own weight. It does not require any external vibration and compaction. The work focused on concrete mixes having water/cement ratios of 0.25, with a packing factor of 1.12. The Concrete mixes contains constant proportions of Super plasticizers, and constant proportions of Cement, Micro Silica, VMA, Coarse aggregate and Fine aggregate for a constant water cement ratios. The percentage of Micro Silica added is 7% for all mixes. The mix proportions are obtained on the basis of NAN-SU mix design. The mixes contain Cement of 574 kg/m3 for 0% addition of fly ash, it vary for 5%, 10% &15% addition but with same total binder content. The workability tests performed in this research were as per EFNARC specifications. Based upon the experimental results, for a water cement ratio of 0.25, fresh and hardened state properties of high strength selfcompacting concrete are evaluated. Due to so many advantages of this concrete, it is suitable for the situations where congested reinforcement is used. In this paper presents self compacting concrete is developed using various percentages of fly ash 0%, 5%, 10%, 15% by weight of cement as partial replacement of cement and the strength of concrete has been assessed.

#### **Malaria Cells Detection Using Digital Image Processing Methods**

G. Ramyapriyanandhini PSG College of Technology, Coimbatore, Tamil Nadu

**Abstract:** In recent years the image processing mechanisms are used widely in several medical areas for improving earlier detection and treatment stages, in which the time factor is essential to find the sickness in the patient as conceivable as quick, particularly in different ailments, for example, the Malaria fever. Jungle Fever has been drawing in the consideration of restorative and sciatic groups in the most recent years due to its high commonness aligned with the troublesome treatment. Insights from 2008 demonstrate that Malaria sickness fever, all through world, is the one that assaults the best number of individuals. Early discovery of Malaria is imperative for fruitful treatment. There are couple of strategies accessible to identify Malaria cells. Here two strategies for division, for example, thresholding and watershed are utilized to distinguish the jungle fever cell. Image quality and precision is the center variables of this exploration, image quality appraisal and additionally change are relying upon the upgrade arrange where low prehandling strategies is utilized in view of Depth-Buffer Method. Following the division standards, an improved district of the question of intrigue that is utilized as an essential establishment of highlight extraction is acquired.

#### **OFDM Based Key Generation Technique**

Sandeep Kamble, Kailash T. Jadhao Alamuri Ratnamala Institute of Engineering and Technology (ARIET) Thane- Maharashtra

Abstract: With enhancement in wireless technology, security has become an important part in designing of network. Network security is an important aspect of system administration. We are living in a world where there is access to information anywhere, anytime, be it voice, multimedia or data analytics. This information should be provided to the user with the highest possible security. Thus the information exchanged for communication should be highly secured, authentic and only accessible to the authorised user. Recent research has shown that, this security can be provided through RSS (Received Signal Strength) based key generation techniques for authentication of user. But RSS based key generation technique has a drawback that the key generation rate is very low. Also RSS based technique is highly applicable for mobile devices. In M2M Communication the devices can be static or mobile based. So we explore a technic which is based on Key generation through CSI (Channel State Information) of a channel. Key generation using CSI information can be efficient in the terms of providing security as they can generate quiet a long key as compared to RSS based technique. We deploy an algorithm as a solution to key generation without using additional hardware for key generation and verify that the malicious user is not able to decode the key sighting to the randomness obtained to our algorithm. The major portion of the algorithm concentrates on making the key random so that the attacker is not able to decode the key within a time span which is vulnerable to the communication. When an attacker tries to use the same algorithm and try to sabotage the communication, due to the property of CSI information of OFDM channel, the generated key will be different. Thus it will not match with the secret key used for actual communication. Hence the user will not be able to hijack the communication.

#### **Riverfront Development of Gomati River in Sultanpur City**

Shradhanand Tiwari, Vandana Pandey Rajarshi Rananjay Singh Institute Of Management & Techonology, Amethi, (UP) Mayo Institute of Medical Science and Nursing College Barabanki, UP

**Abstract:** Sultanpur is distinguished for its unique culture. Sultanpur, and other name kushbhawanpur. Goddess Durga at the beginning of navratra and leaves on vijyadashmi but in sultanpur district, Durga enjoy an extended stay it is the most well-recognized festivals of Sultanpur. About 130 KM from the state capital, this town turn into a 'mini Kolkata' during this period with hundred of Durga idols in a vast temple complex. The river area is a heart of Sultanpur. Sultanpur is a headquarters of the Sultanpur district, north side of this district is bounded by faizabad district, south side is bounded by pratapgarh district, the west side is bounded by Barabanki district & Raibareli district. And the east side bounded by Azamgarh district, Ambedkarnagar district, and jaunpur district. Gomati river is which drains almost the whole city and district. Sultanpur has a dry climate with 20 to 28 degree Celsius. This is wonderful Zone of riverfront. These cities no polluted and cleanness. Sultanpur are ecological and natural resources.

# An Information Extraction Approach with Vehicle and Pedestrian Activity Monitoring For Traffic Management in Smart City

Canan Tastimur, Mehmet Karakose, Erhan Akin Firat University, Elazig, Turkey

**Abstract:** Traffic congestion is one of main concerns of big cities for traffic management. Among different dimensions that make a city smart, one of the very important is transportation. This paper offers an efficient information extraction approach from vehicle and pedestrian activity monitoring for traffic management in smart city. The proposed approach is related to vehicle and pedestrian activity recognition and traffic optimization in order to manage traffic in smart. The traffic management system includes implementation of Particle Swarm Optimization algorithm and Fuzzy Logic Controller in the solution of the traffic signal timing optimization. Moreover, activity recognition is performed to detect traffic lights that are in wrong place, missing and unnecessary. It has been interested not only in activity recognition of vehicles but also in activity recognition of pedestrians in this work. The implementation of this method does not entail complex equipment and feasibility of this proposed method is quite high.

# Comparison of HOG (Histogram of Oriented Gradients) and Haar Cascade Algorithms with A Convolutional Neural Network Based Face Detection Approach

Emine Cengil, Ahmet Cinar Firat University, Elazığ, Turkey

**Abstract:** Face detection is an important computer vision problem that has been working for years. Security and market research are the areas where face detection is used. Face detection is the first step in some problems such as face recognition, age estimation and face expression detection. Several face detection algorithms have been developed up to now. CNN-based algorithms are the state-of-the art technology in image processing problems, as well as other methods in terms of accuracy rates and speed criteria in face detection problems. In this paper, we propose a face detection algorithm having a model like Alexnet. The method is implemented on images from MUCT and FDDB public datasets. In addition, in the study, the Hog feature descriptor and the methods developed with the haar cascade features are compared with the CNN based method using images of the same dataset. Tests show that the proposed method produces better results than the other two methods.

#### **Review on Methods of Self Balancing of Two Inline Wheels**

Chetan Rane, Bharat Kasar, Akul Ghormade, Rajmohammed Kasmani, Aniruddha Foka Rajiv Gandhi College of Engineering, Sriperumbudu, Tamil Nadu

**Abstract:** Self-balancing of two inline wheels has been a problem for many years for researchers and engineers. Many attempts have been successfully made to achieve self-balancing in two wheelers by using gyroscope. This paper illustrates on different techniques of gyroscopic stabilization in a two inline wheels system & some of the recent modern technology to achieve self -balancing in two wheelers. The factors which affects balancing are mass distribution, centre of mass of system, steering of vehicle towards left or right, acceleration & most importantly gyroscopic effect. Most of the projects are based on balancing by using reaction wheel or flywheel which uses sensors along with PID controller, some other sensors such as Control Moment Gyro (CMG) are also being developed & used for analysis. Some projects include concept of gyrowheel which use precession to avoid misbalancing. We have also studied various models of self- balancing where researchers did not use gyroscopic effect. Hondas Riding assist bike incorporating advanced robotics is an example of such system.

#### **Defamation and Newspapers - The Right to Privacy**

Pathuri Venkata Subrahmanyam Rachana Journalism College, Hyderabad

**Abstract:** With the growing number of reader ship as well as newspapers and their district editions coupled with improved transportation facility the newspaper industry has seen a sea change in its circulation, commercial advertisement and other aspects. At this out set it has become imperative for looking at the content that is being published in the vernacular languages' particularly district tabloids. I made a brief and quick survey in erstwhile four northern Telangana Districts, as to the qualification and standards of the reporters / contributors / stringers. Generally, only one person who is working as district head is having university degrees or certification from journalism school. Occasionally this in charge is assisted by another qualified person. In most of the cases the remaining staff is drop-outs from colleges or pursuing education privately and working for newspaper. The payment of wages and other emoluments are dependent not only on the length of the news but also strength (?) i.e., the sensation it has created. The news from such sensational stringers etc., have had precedence over others. This aspect is also seen from the advertisement revenue being mopped up by the particular contributor.

#### **Automatic Solar Tracker With Pre Installed Panel Cleaner**

Aditya Sinha, Ambuj Preet Sir M. Vivesvaraya Institute of Technology, Bengaluru, Karnataka

Abstract: With the forthcoming drought of Non-renewable resources, people are considering to use alternate sources of energy. Solar energy is one such form, it is swiftly attaining centre stage as an important means of amplifying renewable energy resources. So it vital to those in engineering field to understand the technologies associated with this area & design new ideas. The proposed system tracks the sun's movement and tries to maintain the solar panel perpendicular to sun rays, ensuring that the maximum amount of sunlight is incident on the panel. This is better than the fixed solar panel, where the panel is fixed and can't track the transition of the sun from east to west, hence generating optimum energy. This proposed system solves the problem by arrangement for the solar panel to track the sun. The idea in which this paper is unique is that with the solar tracker, the system also includes an automated solar panel cleaning robot. A big issue which is often overlooked too easily is keeping the panel clean. After installation of the panel it is often difficult & dangerous to reach the panels. Also if done manually, it is a time taking process & also requires more money. Hence to remove this limitation use of technology is good choice. This opens up the new field to build a automatic solar tracker which comes with the automatic panel cleaning robot. The project uses a dummy solar panel which is coupled to a DC stepper motor for tracking the sun rays such that maximum sunlight is incident on the solar panel at any given time of the day. The tracking movement of the solar panel is achieved by teaming a DC stepper motor with the solar panel such that the face of the panel is always perpendicular to the sun, so as to generate maximum energy. This is attained by utilizing a programmed 8051 microcontroller to furnish stepped pulses in specific time intervals for the DC stepper motor to rotate the solar panel as appropriate. The cleaning mechanism can be achieved by a DC servo motor which is coupled across the solar panel with wiper & brushes. The DC servo motor is also connected to the microcontroller which is programmed to send signals for cleaning mechanism to operate at different time intervals. Therefore this paper presents a novel method of finding a more economical and efficient system that not only ensures maximum amount of sunlight but also helps in the maintenance of solar panel.

#### **Right to Privacy- LGBT a Study**

Pathuri Venkata Subrahmanyam Rachana Journalism College, Hyderabad, Telangana

Abstract: LGBTs a new look out in the light of Supreme Court Judgement

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# Improved Production of Ga3 on Cheap Novel Substrate by Fusarium Moniliforme

Rashmi Pal, Sengar Amrita, Mishra Vivek Kilpest India Limited, Bhopal

**Abstract:** The study shows that Soild state fermentation technique leads to a better production of Gibberellic acid from the fungi Fusarium Moniliforme 1100. The total yield of gibberellic acid obtained was 5%. we are reporting a new commercially viable improved low cost process using cheap substrates for increased production of gibberellic acid from fungi

#### Importance of ICT among the Madrassa Students of District Cachar, Assam

Hussain Md Bajlun Noor Assam University, Cachar District, Silchar, Assam

Abstract: Information and Communication Technology is the most important gift of technology and with help of this instrument, every form of music can be enjoyed. The cyber society or Information society is only possible because of ICT and without this the society is still crawling to sip the taste of modernity. Education is the most important tool for the fruitful development and if ICT is avail in the periphery of education than the outcome will flow over the top. Many such research works proved that the modern form of education is far better than that of conventional one. The proper use of Smart classroom, Computer laboratory, and Digital library has taken the Student- Teacher fraternity to a level which is always regarded as the best ever relation. And when these relations stand as best one the society will definitely fly with a different hue. "Madrassa is an institution of learning, where Islamic sciences including literary and philosophical ones are taught" (encyclopedia of Islam - Leiden E. J. Brill). The main aim and purpose of Madrassa is to inculcate the belief and practice of Islam to its followers and also to guide them to follow the Holy Qur'an and saying Prophet Muhammad (PUBH). Islamic form of education will definitely lead the student to a religious juncture but to walk parallel with other fraternity the system needs the general form of education too. Generalized form of Madrassa education shift itself from pious to modernized form and with inhaling the modern prospect the system edge itself to ICT. Though there are many restrictions in implementing those gift of science. Along with the prospective scholar of Islam, the government too help to implement computer as a subject in the syllabus and after taking the sip of the computer the student as well as the general follower too praising the system as well as the technology. Because of computer everything become easily reachable and the bonding between teacher and student reached its peak. And too computer make the study easier and most interesting one.

### CFD Based Investigation on Delay of Boundary Layer Separation by Active Flow Control for NACA0084M Aerofoil

Akshay Ashok Kumar Independent researcher

**Abstract:** The unsteadiness such as boundary layer transition and turbulence at high angles of attack result in lift loss and increase in drag over an aerofoil. Numerous techniques such as suction at slots, flaps, bumps, high lift devices etc. have been developed by the scientists to control the separation delay and thereby prevent the aerodynamic losses at higher angles of attack. This research work aims at studying the effects of delaying the boundary layer separation by adopting blowing active flow control with local jets with varying velocity ratios and at different angles of attack on a 2D NACA 0084M aerofoil. Four different ratios of jet velocity (viz., 1, 2, 6 and 12) have been considered and the aerodynamic performance of each has been evaluated. The research aims to focus on the improvements in lift and drag characteristics of the above mentioned aerofoil and identify the best possible jet velocity.

# Effect of Heat Stress on Amylase Activity in Chalky and Translucent Rice Genotypes

Sharma Kanu Priya, Sharma Neerja Punjab Agricultural University, Ludhiana

**Abstract:** Occurrence of chalkiness is a major problem as it is an important parameter in determining quality of rice grains. High temperature during the grain filling period results in loose packing starch granules that could be due to involvement of starch degrading enzymes i.e., amylases. Therefore, two rice genotypes viz., PAU 3699-13- 2-1- 1 and PR122 were sown at two different dates. Thirty- day old seedlings of the two genotypes were transplanted in the field at two different times in order to expose the plants to different temperature regimes during grain filling. A Significant increase in total amylase activity was observed during early transplanting. The chalky genotypes i.e., PAU-3699- 13-2- 1-1 possessed higher  $\alpha$ -amylase activity than translucent genotype (PR122) during heat stress. Whereas, PR122 possessed higher  $\beta$  amylase activity than PAU-3699- 13-2- 1-1. High temperature encountered during early transplanting resulted in induction of activities of amylases.

#### Isolation, Identification, Purification and Characterization of Antibiotic Producing Bacteria from Different Soil Samples

Rajnish Vishwakarma Bundelkhand Institute of Engineering and Technology, Jhansi

**Abstract:** Streptococcus and Micrococcus luteus are the best source of antibiotic. In the present study 4 culture (Bacillus cereus(S6), Pseudomonas fluoresens(S1), Streptococcus(S2), Micrococcus luteus(S3) were isolated from 6 soil sample collected from Lucknow, Kanpur and Unnao. Isolation of microbes was done by serial dilution method. Primary screening of the culture was done by streaking. Gram's staining was done to check the culture was pure or not. Identification was done by Bergey's manual, further media optimization was done. Production media was prepared for these 4 culture in which the best carbon sources was Sucrose, Glucose, Dextrose, Sucrose best nitrogen sources were Yeast extract, the best temperature was 370C and best pH was 11,7,7,7(Micrococcus luteus, Streptococcus, Pseudomonas fluorescens, Bacillus cereus) respectively. Further extraction of seconda ry metabolite was done by using one solvent: (Chloroform) for extracellular component and (Methanol) for the intracellular component. Further purification of the antimicrobial compound using TLC (thin layer chromatography) and a spectrophotometer was performed resulting Quercetin compound.

### Mid-Point Algorithm Based Sink Movement to Improve Lifetime of the Wireless Sensor Networks

Ankush Bhatt, Geetika Gandhi CSE Department, RIMT-IET College, Mandi Gobindgarh, Punjab

**Abstract:** The wireless sensor networks with the mobile sink are more effective in providing better network performance as compared to the ones with the static sinks. This paper proposes a scheme cluster based WSN with the tour planning of the mobile sink. Since the deployment of the nodes in the WSN is purely random, this leads to some nodes in the network not connected to any cluster (when the clustering is done). The proposed scheme takes into consideration cluster heads and unconnected nodes to plan the trajectory of the sink movement. The scheme was implemented in NS2.35 and compared with the existing approach based on the remaining energy, routing overhead and packet delivery ratio. The scheme has outperformed the existing scheme.

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#### Various Mobile Sink Approaches for data aggregation in WSN: A Survey

Ankush Bhatt, Geetika Gandhi CSE Department, RIMT-IET College, Mandi Gobindgarh, Punjab

**Abstract:** A WSN is made of one or numerous distant sinks and numerous minute, low-power sensors, apiece equipped with actuators, sensing devices, and wireless transmitters and receivers. Sensors are generally power-driven by smaller batteries. The sink is normally static and located outside the network. This results in the increase of the communication distance between the far away cluster heads from the sink. These spent higher energies than those located close to sink. In order to balance the energy, this paper displays various clustering approaches that makes the use of the mobile sink to collect data from the cluster heads.

# CFD Based Quantification of Aerodynamic Performance of an Automotive With Roof Dimples

Akshay Ashok Kumar University of Leeds, UK

**Abstract:** The impact of aerodynamics on vehicle performance has gained greater importance in the modern days. The effects of drag and lift forces on automotives have been well accounted for and engineers are relentlessly working on minimising the negative implications of these aerodynamic forces. The dimples on golf balls have been proven to reduce drag and are given credit for a golf ball's longer flight. The use of dimples to reduce drag has often inspired many aerodynamists and this research aims to quantify the drag and lift forces on an automotive with dimples on its roof. A wide range of dimple ratios, arrangements and velocities have been taken into consideration and successful reduction in drag and lift coefficients has been reported.

# Influence of Age and Gender on Interpupilary Distance and Comparison of Pd Ruler and Auto Refractrometer Values of Interpupilary Distance

Zakia Batool, Dr. Waqas Mahmood, Umar Waqas Khan University of Agriculture, Faisalabad

Abstract: Information about the normal values of interpupilary distance (IPD) for particular age group, gender and ethnic background has important clinical implications. Normative values of IPD could be useful in the diagnosis of certain syndromes and also in surgery after facial trauma. Our main aim to carrying out this study was to find out the effect of gender and age on interpupilary distance in total study sample of 30 subjects within the age limit of 15 to 60 years and IPD measurements were compared taken with two different instruments i.e. PD ruler and auto refractrometer. Data was collected using descriptive cross sectional study at Ophthalmology Department at Medina Teaching Hospital, Faisalabad. Proper room for examination with all instruments that were used in study was chosen after history taking. With torch light we examined that the pupil is round, regular and reactive. Then IPD values were measured using a millimeter PD ruler and auto refractrometer. Our study results show that gender has an effect on IPD measurements and also that males have 3mm wider papillary distance than females. Our study subjects were divided into 3 age groups and IPD in younger age (15-30 years) group keep on increasing, after wards it remains constant. And another objective of our study was to compare IPD values with different instruments i.e. PD ruler and auto refractrometer used and results are significant. It is suggested that IPD should be an integral part of eye examination to avoid any future intolerance of spectacles and asthenopic symptoms.

# Use of Demolished Waste in Partial Replacement Of Course Aggregate With Concrete

Akash Chandra, Sri Hari Reddy, Gokulnath.V Saveetha School of Engineering, Chennai

**Abstract:** There is Associate in Nursing outsized amount of demolished waste generated annually in Republic of Asian country and various developing countries. Since very little bit of this waste is recycled or reused. So, disposing this waste is also a really major drawback as a results of it desires Associate in Nursing outsized amount of house. For the study seven, fourteen and twenty eight days compressive strengths were recorded.

#### A Comparative Study of Surgically Induced Astigmatism in Superior, Supero-Temporal and Temporal Incision in Small Incision Cataract Surgery

Dr. Madhumita Prasad, Dr Sachin Daigavane Datta Meghe Institute of Medical Sciences, Maharashtra

Abstract: The eye is the window of the human body through which it feels its way and enjoys the beauty of the world. With all the possible modalities of cataract surgery, we try to give a normal vision. But Surgically Induced Astigmatism (SIA) is one of the causes of a poor quality of vision. We have studied SIA in 3 different sites of incision in Manual Small Incision Cataract Surgery (SICS). AIM: To compare between the surgically induced astigmatism(SIA) in small incision cataract surgery(SICS) by superior incision, temporal incision and supero-temporal incision. Materials and methods: Three hundred patients were studied. The patients were randomly assigned to any of three groups. The three groups had 100 patients each. The patients in group A underwent manual SICS with a superior incision, the patients in group B underwent manual SICS with a supero-temporal incision and the patients in group C underwent manual SICS with a temporal incision. The patients were examined on the postoperative days 1 and 7,1 month and 6 weeks. The uncorrected and the best-corrected visual acuity was recorded and a slit-lamp examination and auto-refracto-meter and keratometry examinations were also done. Statistics: All the calculations were performed by using vector analysis method. Statistical analysis was done by using descriptive and inferential statistics using Chi square test, One way ANOVA and Multiple comparison Tukey Test. Results: The mean SIA in group A was found to be  $1.32\pm0.97$ , in group B, it was  $1.03\pm0.75$  and in group C, it was  $1.00\pm0.60$ . The p-value accordingly was < 0.001, which was highly significant. Conclusion: SICS which is done with a temporal and a supero-temporal approach provides a better quality of vision due to a significantly less SIA than the superior approach.

#### A Study of Performance Appraisal at IBM, Bangalore

Sruchita Maheswari Rath National Institute of Standards and Technology

**Abstract:** In this study the operative function in the human resource department are analyzed with respect to performance evaluation system of the company. Performance appraisal system is considered as a significant tool in all organizations for achieving goals effectively and efficiently. The study recommends the need to ensure fairness so that it does not demotivate an employee or have a negative impact on goal accomplishment. The findings revealed that the company has a very well designed Performance appraisal system, which involves feedback as well as reward system and the employees, are satisfied with the existing Performance appraisal system. But, more efforts are to be made to make the approach more effective to ensure increased productivity and high morale among the employees, which would lead to further growth of the company in all respects.

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#### The Impact of Nitric Oxide (No) On the Biological System

Vijaya Dubey N.S.G.D College, Fatehpur, U.P

**Abstract:** As very earlier it has been discussed that Nitric Oxide are basic requirement of human life, hence it is our prime duty to save them to avoid the disturbance of biological system .This molecule is involved in the regulation of plant growth and development ,pathogens defense and abiotic stress responses .NO is rapidly induced potent plant growth regulator .In the present work the compounds were synthesized by transition elements of VI group using different standard procedures and carried out to study the effect on biological system. As a result it was found that some transition elements are very useful to prevent the infectious disease

#### Flexural Behaviour of Concrete Beams Reinforced With GFRP Rebars

Chidananda S. H, R. B. Khadiranaikar Basavesvar Engineering College (Autonomous), Karnataka

**Abstract:** This study reports test results of 12 concrete beams measuring 150mm wide × 180mm deep × 1200mm long reinforced with glass fiber-reinforced polymer (GFRP) bars subjected to a four point loading system. The test specimens were classified into three groups according to the concrete compressive strength. The main variation done for each beam in all the three groups was percentage of reinforcement (0.5%, 1%, 1.5% and 2%). Since all the beams were over reinforced failure occurred due to rupture of concrete at compression zone. The failure is initiated by a vertical crack at the midspan which extended up to compression zone of the beam and propagated horizontally which leads to bond failure between top concrete and compression reinforcement. The test results revealed that the crack widths and mid-span deflection significantly reduced by increasing the reinforcement ratio. The ultimate load increased by 7.5%, 16.8%, 27.7% as the reinforcement percentage increased from 0.5% to 1%, 1.55 and 2% respectively. The flexural provisions of structural design guidelines namely ACI 440.1R-06, ECP 208-2005 and CSA S806-12 were evaluated against the test data. ACI 440.1R-06 over estimates the moment resistance of GFRP bars as compared to other codes and experimental results. Whereas all the design guidelines predicts nearly the same values for deflection. And for crack width approximation Toutanji's equation is more accurate compared to ACI equation.

#### **Object Sorting Robot Based on Shape**

Priya Vinayak Garad G. H Raisoni College of Engineering & Management, Pune

**Abstract:** In present days, all industrial systems are fully automated. Object sorting is one of the popular system for industrial applications. In past days humans are used for the object sorting but it was the time consuming process for large number of objects in industries. Replacement of human operators with robotic arm will reduce human efforts and also provides high accuracy & efficiency. Robotic arm operating using ARM7. Detection of shape is using image processing in MATLAB. Robotic arm is control by microcontroller with DC motor. This paper presents on object sorting base on shape of object using image processing. Image is captured by using camera, then image processing is perform for shape identification. This project deals with fully automatic industrial material handling system. The aim of this project is the separate out objects according to it's shape.

### Use of Demolished Waste in Partial Replacement of Coarse Aggregate in Concrete

Gowtham, Anandhan .R, V. Gokulnath Saveetha School of Engineering, Tamil Nadu

**Abstract:** There is an oversized quantity of dismantled waste generated each year in Republic of India and alternative developing countries. Since terribly bit of this waste is recycled or reused. So, disposing this waste may be a terribly major problem as a result of it needs an oversized quantity of house. This study may be a a part of comprehensive program whereby experimental investigations are distributed to judge the impact of partial replacement of coarse mixture by dismantled waste on compressive strength and workability of DAC (Demolished mixture Concrete). For the study seven, fourteen and twenty eight days compressive strengths were recorded. The previous study on this project shows that the compressive strength of the DAC (Demolished mixture Concrete) is somehow resembles with the traditional concrete if utilized in a correct quantity up to half-hour. thus during this study we've got taken the dismantled concrete mixture and also the concrete cubes were casted by that dismantled concrete mixture then any tests conducted like workability, compressive strength for that DAC and also the result obtained ar found to be comparable the traditional concrete

#### **Veneers: Modern Approach of Dentistry-A Review**

Dr. Raisa Rashid, Dr. Waseem-ul- Ayoub Government Dental College, Srinagar, Jammu & Kashmir

**Abstract:** A captivating smile showing an even row of natural, gleaming white teeth is a major factor in achieving that elusive dominant characteristic known as personality. An individual can achieve this personality with a warm, vibrant and friendly smile. With advances in science and technology in the field of esthetic dentistry. porcelain laminate veneers has worked wonders to the victims of unaesthetic and discoloured teeth. Veneers provide the most conservative technique of improving the appearance, modifying contour, restoring enamel defects, masking discoloration and closure of diastema. The conservation of sound tooth structure helps to preserve the tooth vitality and reduces postoperative sensitivity. The porcelain veneers are one of the most aesthetic,durable conservative and biocompatible anterior restorations. They consist of a thin layer of porcelain that is directly bonded to the labial surface of the tooth structure.

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#### **Design & Analysis of Robotic Arm's Part for Carbon Composite Material**

Mukund Narayan Pandey, Amit Kr Srivastava, Paveen Kumar Maurya Dr. APJ Abdul Kalam Technical University, Lucknow Apsinox DesignEra Pvt. Ltd.

**Abstract:** The paper is presents the understanding important of digital prototype over prototype in manufacturing engineering. Today, in this modern fast growing industrial age, every company is looking for speed in manufacturing to meet the needs and requirements of its clients. Whereas agricultural field is still an exception. Robots are more quickly, cheaply, and accurately than humans have ever been. The materials in contact with the moving arm experience very large elastic deformations and stress, and may move at a velocity close to that of the tool. Our project mainly deals around the shearing operation, our challenge is designing and optimizing a light weight material robotics arm's part which is more durable and reliable. After related study we have achieved the design and analysis of a jointed robotic arm's part were the base is fixed and the remaining joints move in vertical and horizontal directions.

# A Review Paper on Residential Grid Connected Solar Photovoltaic System Using Matlab Simulink

Neetu, Surender M. I. T. M Jevra, Hisar

**Abstract:** With pace of time there is a huge development in technologies. In recent time there is a concern of energy as right now fossil fuel is used but as population increasing in near future to meet demand it would be very tough that why we are focusing on renewable energy. Distributed energy resources based micro grid and Nano-grid framework is most technically viable bottom-top approach to sustainably meet everincreasing demand of rural and urban communities. Recently the growth of DC operative home appliances like mobile and lap top chargers, ovens and hair dryer's etc. are increasing and therefore a DC/DC converter is an efficient way to meet the electricity need from the local DER and helps in improving the system efficiency. In our dissertation we took three different section of solar panel and after that simulation carried out with help of buck boost converter and besides this MPPT algorithm (P & O method) for solar PV module and closed loop PI control system also used. The proposed methodology is to extract maximum DC power from solar PV system and it is directly fed to DC load or DC Nano grid. The simulation results demonstrate the boost converter application for maintain constant voltage at DC bus irrespective of variation of solar PV generation.

# Microbiological Characteristics of River Ganga In Between Khankhal to Bhogpur

Dr. Deepika Vats Himalayan Garhwal University, Pauri Garhwal, Uttarakhand

**Abstract:** The Present Study indicates the microbiological characteristic of water quality, monitoring, its techniques of standard plate count S P C bacteriological as the human population increases people to express their desire for a better standard of living and as economic activities continue to expand in scale and diversity, the demand for freshwater resources continue to grow. Due to sewage inflow caused a severe and persistent microbial pollution in the urban tanks of the city. A regular monitoring of water bodies with the required number of environmental parameters including that bacteria logical growth.

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#### Diversity Indices of Aquatic Macrophytes in Jharokh Wetland, Assam, India

Soni Talukdar Gauhati University

**Abstract:** The present study was conducted for a quantitative investigation of macrophytes of the Jharokh wetland of the Gorjaan wetland system of Hajo area of Kamrup district of Assam, during March 2015 to February 2016. During the investigation, 140 different species of macrophytes were recorded in pre monsoon and 60 species in winter from the wetland. While the number of free floating, rooted floating leaved and submerged species are almost same in both the seasons of the wetland, the number of emergent species vary in both the two seasons i.e 80 in pre monsoon and 38 in winter in the wetland respectively. Based on Importance Value Index (IVI) Eicchornia crassipes (Mart.) Solms, Eurayle ferox Salisb, Ludwigia adscendes (L.) H. Hara, Hygroryza aristata (L.f.) Royle, Cyanodon dactylon and Hymenachne acutigluma (Steud) Gill, Leersia hexandra L., Lemna minor, Ipomea carnea var. fistulosa were dominant species in pre monsoon whereas Eicchornia crassipes (Mart.) Solms, Ruppia maritima, Myrophullum alterniflorum, Chara vulgaris, Ceratophyllum demesrsum (L.), Nelumbo nucifera Gaertn, Nymphaea nouchalli Burm. f., Nymphoides indicum (L.) were dominant in winter.

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**Recent Progress in Dye Sensitized Solar Cells** 

Kumar Avinash Chandra, Sukhminder Singh Gill Institute of Engineering & Technology, Lucknow

**Abstract:** The article summarizes the recent trends in solar cells particularly in the field of Dye Sensitized Solar Cell. The DSSC we would refer for short for Dye Sensitized Solar Cell. The Dye Sensitized Solar Cell are the recent trend in the field of solar photo voltaic electricity generation. The Solar Cells captures the solar radiation and he photovoltaic material convert those solar radiations to the usable voltage which could be used for various purpose. The conventional method using in this regard consists of use of Silicon wafer photovoltaic solar cell which are way too costly to be used. The most efficient way to achieve the objective (cheaper solar energy) is to replace the Silicon from the PV Solar Module (Silicon being the most costly material of the module) with any other chemical or element which is abundantly available in nature and also is very cost effective. Titanium Dioxide (TiO2) is one major compound which can be used to replace Silicon along with the Ruthenium Dye. Apart of presently being many methods for generation or harnessing Solar energy, the Dye Sensitized Solar Cells or DSSCs have acquired the attention of much more wider section of scientists and engineers working in this field. Due to its greater and wider working capability in the solar UV Spectrum ad future scope of the material and porous structure and semiconducting behaviour the mesoporous tiatania made Dye Sensitized Solar Cells are widely expected to be used in innovative applications.

# Novel Approach for Residential Grid Connected Solar Photovoltaic System Using Matlab Simulink

Neetu, Surender M. I. T. M Jevra, Hisar

**Abstract:** The need for energy is never ending. This is certainly true of electrical energy, which is a large part of total global energy consumption. But growing in tandem with energy needs are the concerns about sustainable development and environmental issues, such as the movement to reduce greenhouse gas emissions. The fossil fuels and nuclear fuels are not renewable and reserves of these fuels will run out some day in the future. The exploitation of solar energy has become an essential measure to address present energy shortages and environmental problems. We have several reasons to be optimistic as there is great excitement about the possibilities opening up before scientific community in the field of solar PV. Therefore today our main focus is to develop renewable energy especially from solar. Government of India also promoting solar energy and also providing subsidy to peoples so that pollution level means CO2 emission level decreased. In our research work photo crystalline PV solar panel is used and with help of boost converter DC level increased and this is achieved by MPPT also used PI controller to limit voltage and current. Our main focus is to reduce THD level under 5% as per IEEE standards. Our THD is below the level of IEEE standard

### Scaling of Ground motions for performing Incremental Dynamic Analysis of RC framed structures

Nilesh Chandrakant Gaikwad, Abhijeet A. Galatage, Dr. Sumant K. Kulkarni Flora Institute of Technology, Pune Flora Institute of Technology, Pune, Maharashtra

**Abstract:** In the modern world of structural engineering design of structures subjected to earthquake promotes a need of developing simple and practical methods for estimating seismic demands of structures. These methods are based on their behavior which is to be predicted prior to design. Researchers are implementing various static as well as dynamic, linear as well as nonlinear to predict the performance of the structure. This study aims towards performing incremental dynamic analysis of structures using SAP 2000 subjected to several scaled ground motions scaled using SEISMOMATCH 2016. This procedure is followed by the pushover curves plotted for each structural model. The 5, 12 and 18 story moment resisting RC frames are used for study which is located in the highly active seismic region of north India. Due to improper knowledge of seismic hazards buildings designed using modern principles observe earlier failure. This leads to loss of property as well as lives.

#### **Evaluating Seismic Efficiency of Combination of Bracing for Steel Building**

Suyog Sudhakar Shinde, Abhijeet A. Galatage, Dr. Sumant K. Kulkarni Flora Institute of Technology, Pune

**Abstract:** Steel structures played an important role in the construction industry.It providing strength, stability, and ductility. A study regarding the seismic response of steel structures is necessary. In the present study, modeling of the steel braced structures with a different combination of bracing and analyses structure using commercially available SAP2000 software. A bracing element in the structural system plays a vital role in structural behavior during an earthquake. In this study there are four types of braces are used. Such as X bracing, V bracing, inverted V bracing, and knee bracing. The combinations from these bracing are X and V type bracing, X and inverted V type bracing, X and Knee type bracing, V and inverted V type bracing, Knee and inverted V type bracing. Response spectrum method is used for seismic analysis. Comparison between the seismic parameters such as base shear, roof displacement, story drift, for steel frame with different combination of bracing are studied

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#### **Wind Excitation Control in Skyscraper**

Prashant Borge, Abhijeet A. Galatage, Dr. Sumant K. Kulkarni Flora Institute of Technology, Pune

**Abstract:** In skyscraper structure vibration produces because of wind intensity. This wind intensity transferred into dynamic load which cause the structure and along its connected portion structure create problem. The type of high rise structure mass create huge problem in the height increases, but the modified shape as well as some passive energy control system reducing lateral load on the structure. The effect modified shape of structure with great height analyses for along, across direction and twisting of structure in Etab. Base on the analysis results, it has been concluded that effect of tune mass damper intermediate stories play significant role to decreases the natural frequency and lateral displacement in skyscraper.

# A Five Phase Axial Flux Permanent Magnet Generator for Wind Turbine Application

R. Shanmugarajan, P. Prabakaran, A. Ariventhan AVS College of Technology Salem, Tamil Nadu

**Abstract:** This project discusses the benefits of five-phase technology for Wind Turbine Application with Axial Flux Permanent Magnet BLDC Generator (AFPMG). The radial flux permanent magnet generator has a setback of very low-speed applications because of the presence of cogging torque. This can be overcome by using an axial flux permanent magnet generator which has no cogging torque and has more advantage than a radial flux generator. Investigations proved that the five-phase topology harnesses some specific and important benefits that are not provided by three-phase systems. The benefits include improved fault tolerance and reliability, and reduced voltage, torque ripple, and size of DC link capacitor. These are general improvements that are sought after in many applications including renewable energy applications. The objective of the project is to design a five-phase Axial Flux permanent magnet BLDC generator for 1000W at a wind speed of 9m/s. Performance analysis of Axial Flux permanent magnet is investigated. MATLAB/Simulink model for five phase rectifier and Generator model is discussed. Test results are also presented in this project

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#### **Effect of MANET Nodes on the Performance of WIMAX**

Ajay Kumar, Pankaj Sharma, Puneet Jain Adesh Institute of Engineering & Technology, Faridkot

**Abstract:** In this paper the interference is analyzed between wimax and manet nodes. For this manet nodes are moved using different mobility 5m/s -7m/s. The effect is also analyzed by varying number of cells and number of users. The performance has been analyzed in terms of Load, throughput and delay. From the result it is concluded that the performance decrease due to interference.

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Comparative Study on Fresh and Hardened Concrete Properties of Ternary
Blend Self Compacting Concrete

#### Rachael Challagalli, G. S Hiremath Basaveshvara Engineering College, Karnataka

**Abstract:** Self- Compacting Concrete is a special type of concrete that is able to flow and compact under its own weight and can occupy all the spaces in the form without any vibration and at the same time it is cohesive enough to be handled without bleeding or segregation. In recent years, self-compacting concrete has been gaining wide range of application for placement in congested reinforced concrete structures with difficult casting conditions. For such applications, the fresh concrete must possess high fluidity and good cohesiveness. The use of additive materials such as industrial wastes as mineral admixtures can ensure the required concrete properties. The initial experimental study aims at producing and evaluating SCC for ternary blends incorporating fly ash, GGBS, sugarcane bagasse ash and alcoofine as partial replacement of cement. Five number of SCC mixes were investigated in this study. The self-compacting mixes have cement replacement with different percentages of mineral admixtures while keeping cement quantity fixed for 360kg/m3. The tests such as slump flow test, V funnel test, T500 slump flow test, J ring test and V5min test were carried on fresh properties of SCC mixes to check the prerequisites mentioned in EFNARC, the mechanical properties of hardened concretes such as compressive strength, split tensile strength were also carried on all the mixes. Incorporating these mineral admixtures resulted in producing economical concrete and the workability requirements of SCC were satisfied, the strength obtained was maximum when alccofine and GBBS were added in the concrete.

#### **Analyze Portrayl of SEP for WSN Using Matlab**

Aditi, Arun Rana P.I.E.T - Panipat Institute of Engineering & Technology, Panipat, Haryana

**Abstract:** Wireless Sensor Networks (WSNs) are made out of heaps of sensor nodes, with restricted energy, that cooperates to perform a sensing project. In Wireless Sensor Network, the energy efficiency is the important thing difficulty for designing the protocol because sensor nodes have one-time battery backup. There are many cutting-edge protocols which increase the life of the wireless sensor Network through correctly the use of battery energy of the sensor node. In this research work, a brand new strategy and protocol based totally on Stable Election Protocol (SEP) in wireless Sensor network have been proposed. For proposed method, we've assumed heterogeneous environment i.e. the impact of heterogeneity of nodes, in terms in their strength, in wireless sensor networks which might be hierarchically clustered. In those networks, some of the nodes grow to be cluster heads, combination the records of their cluster members and transmit it to the sink. We count on that a percentage of the population of sensor nodes is ready with extra strength assets. We additionally anticipate that the sensors are randomly distributed and aren't cellular, the coordinates of the sink and the size of the sensor discipline are known. The uniqueness of the proposed method is that cluster head is chosen amongst normal Nodes, Intermediate Nodes and Advanced Nodes based upon their common strength. This assets will increase the number of cluster heads in keeping with spherical and number of packets per spherical. First of all the nodes had been labeled as everyday Nodes, Intermediate Nodes and advanced Nodes. Then, all three kinds of nodes are similarly categorized as Alive nodes and dead nodes. The cluster head is selected among all 3 types of nodes on the premise of average energy. Cluster head collects statistics from member nodes, mixture it and transmit it to the base station. Cluster head choice is maximum critical. Once the cluster head is selected then the cluster head broadcasts a commercial message to the nodes. The nodes get hold of the message and decide to which cluster head it is going to be long for the cutting-edge round. A Modified-SEP (proposed approach) has been applied and in comparison with existing SEP. Three parameters i.e. the number of dead nodes, the number of alive nodes and packets transmitted to base station and so forth has been taken as performance parameters. The simulation end result shows that overall performance and throughput of our proposed protocol deliver the effective and widespread power efficiency in addition to more Network lifetime as compared to different protocols. MATLAB R2013a has been taken as an implementation platform.

#### **Safety Begins From Childhood**

Dr. Chitra Indian Head Injury Foundation, New Delhi, Delhi

**Abstract:** Every year, India experiences an unusually high number of fatalities caused by Head and Traumatic Brain Injuries (TBI). Of these, 65 to 70 % are caused in road mishaps. The balance are due to industrial accidents, War and Counter Insurgency Operations (CI Ops), Sports field Accidents, Domestic Violence, Riots, Natural Disasters and other acts of God including even an accidental fall. In 2015 alone, the number of officially recorded deaths was over 1,46,000, and injured with debilitating trauma was over half a million. This toll is growing at an alarming rate with no check or respite in sight. With one percent vehicles, India carries the burden of over 10 % deaths in the world and there is a traffic accident every minute and a death every 4 minutes. In the US, the fatality rate is one out of two hundred victims of road trauma and in India it is one in six. A majority of Head Injury victims are two wheeler riders and pedestrians, and unfortunately, we have come to be termed as the "Head Injury" Capital of the world. The victims in India are mostly in the age group of 18-44 years and are often, the only "Bread Winners" for a family of 4 to 6. A large number of survivors of such accidents sustain varying degrees of debilitating damage and require long term rehabilitation treatment. This is virtually non-existent in most parts of India, and where available, is highly expensive. In several cases, victims of TBI have to relearn to walk, talk and formulate thought from scratch. Even mild TBI leads to symptoms like decreased memory, insomnia, inability to focus, anxiety, mood swings, irritation, etc.

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