

Abstract Proceeding of
International Conference on Innovative Methods in Engineering Applications, Applied Sciences and
Management Cases
IMEASMC-2016

Date: 31st January 2016

Message

International Conference on Innovative Methods in Engineering Application, Applied Sciences and Management Cases.” IMEASMC-2016 addresses these issues through the seminar on a vibrant platform for academicians, researchers and industry practitioners from the related areas to share their original research work , practical experience and exhibitions, bringing together representatives of all those involved at every fields of business, industry, academic, government and civil.

The International Conference facilitates ideas, statistics, and interpretation and program possibly to solve. The conference focuses on “Innovative Methods in Engineering Applications, Applied Sciences and Management Cases”. The conference will address recent issues and will look for significant contributions to advanced engineering studies in theoretical and practical aspects. It provides a multi-disciplinary forum for the exchange of knowledge and expertise in the recent developments in the fields of Engineering Science and Technology. I am self-assured that your deliberations and the outcome of your efforts will raise public awareness about the role and value technology as a tool to promote economic, social and cultural development while addressing the complex issues on your agenda.

It is my privilege to wish all the delegates a successful techno career and take the special honour to welcome you all to this International Conference IMEASMC-2016.

We look forward for key note addresses, invited lectures, paper presentations and audience participation during the conference.

With best wishes.

Dr. K. Vijaya Kumar
Head, Department of Physics
JNTUH CE Jagtial

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Message

I am happy to note that Anveshana Educational and Research Foundation is organizing a conference “Innovative Methods in Engineering Application, Applied Sciences and Management Cases” at the National Small Industries Crop Ltd.

I firmly believe that this Conference provides a perfect platform to share the views of the students coming from various institutions and provides an opportunity for exchange of ideas among students. I hope this provides better interaction between various institutes for bilateral relations among student community.

I wish the organizers all the best and hope they will conduct similar programmes in future for the benefits of both students and Staff.

Dr. M.Ashok
Principal
SSJ Engineering College

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Message

I am glad to know that AERF organizing one-day conference on “Engineering Application, Applied Sciences and Management. - The fabulous resources” on 31st January 2016 at NSIC (ECIL) Hyderabad.

This event would facilitate the people of India to conquer the innovative methods in engineering applications. The conference would stand as best platform to share the knowledge and best practices in the engineering field and implementation of this technology would yield good results in the industries.

This conference will encourage students to learn from the various distinguished speakers coming especially for the conference from all over the state. I hope our students will take this opportunity and have value addition in the referred papers.

I am looking forward to share with you a fruitful knowledge and I wish all the very best AERF.

Dr. K. E. Balachandrudu
Principal
MRIET

Message

I am glad to know now that AERF (Anveshana Educational and Research Foundation) is organising a conference on “Recent Trends in Engineering Applications and Basic Sciences” on 8th Nov 2015 at The Institution of Engineers (India) in Hyderabad.

This conference would understand the people of India to conquer the innovative methods in engineering application. The seminar will go a long way in establishing the concept and disseminating the knowledge about the innovative methods in engineering application and applied sciences.

I am looking forward to share with you a fruitful knowledge and I wish all the very best AERF.

Dr. Jai Krishna
Princippal
Diploma College of CITD

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Message

I on behalf of administration would like to welcome you all to the Anveshana Educational and Research foundation's IMEASMC-2016 the International Conference on Innovative methods in Engineering Application and Applied Sciences and Management cases. The conference is organised as a set of tracks in Humanoid Robots, Electronic Materials, and Computer-based manufacturing technologies: CNC, CAD, CAM, FMS, CIM, Electric Drivers and Application and Inverter and Converter Technology and many more. There is separate track of management and electrical stream. The objective of the International Conference is to provide a forum where representatives from industry and academia can meet, discuss and present the most recent advances in science and technology.

We hope that you will find the conference both enjoyable and valuable. I am greatly honoured to welcome the delegates and the participants on the occasion of International Conference IMEASMC-2016.

Ramesh Munagala, Dy. CEO.
SME Bushiess Management Institue

On behalf of IMEASMC-2016 Organizing Committee, I am glad to welcome you to the International Conference on Innovative Methods in Engineering Application, Applied Sciences and Management Cases. IMEASMC-2016 continues the tradition of addressing issues of immediate and long term interest to researchers and engineers in developing various engineering systems through technological innovations. The aim of the IMEASMC-2016 has always been to provide an international forum for individuals from all over the world and to share and discuss their innovative thoughts in the International Conference on Innovative Methods in Engineering Application, Applied Sciences and Management Cases. These currently include topics in wireless sensor network, mobile computing and innovative methods in management along with excellence management. I wish you all a wonderful and exciting time here.

Dr. Sucharitha Devarapu
Director
AERF

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ADVANCED VIDEO ENCODING AND DECODING USING H.264 VIDEO CODEC

[Paper ID-ECE1001]

A paper presented by: B.Prabhakar,

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Abstract

Channel errors have a very detrimental effect on the perceptual video quality. Despite the research done in the field of wireless multimedia, delivery of real-time interactive video over noisy wireless channels is still a challenge for researchers. This work presents a method for improving the quality of video transport using H.264/AVC codec over wireless networks that is the prioritization of different parts of I and P-frames. The effectiveness of the technique is demonstrated by examining its performance when the transport of the prioritized video streams can be accomplished using packet switching technology over the enhanced general packet radio service (GPRS) access network infrastructure.

The video streaming and encoding model is implemented using matlab simulink model. The performance of the video streaming has been evaluated using JM 18.5(Joint Model) software.

SECURITY ENHANCEMENT IN WIMAX 802.16 USING OFDM

[Paper ID- ECE1002]

A paper presented by:B.Prabhakar

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Abstract

The WiMAX 802.16 physical (PHY) layer can be characterized by various techniques. Systems such as CDMA (Code Division Multiple Access), TDM (Time Division Multiplexing), FDM (Frequency Division Multiplexing) and QAM (Quadrature Amplitude Modulation). In most of the existing systems are based on CDMA. In this paper, physical layer characterized by OFDM (Orthogonal frequency-division multiplexing) is proposed. It is because, in contrast to CDMA, OFDM receiver collects signal energy in frequency domain, thus it is able to protect energy loss at frequency domain and is more resistant to frequency selective fading than single carrier systems. The OFDM is accompanied by 64-bit QAM, to achieve the maximum PSNR (Peak signal-to-noise ratio) and to remove the AWGN (Additive White Gaussian Noise) associated with the channel. The simulations are performed using MATLAB tool and better results are achieved when compared to previous models of physical layer in WiMAX. All the simulations the first version of the standard only supported are performed using MATLAB tool.

Keywords: WiMAX, CDMA, TDM, FDM, QAM, OFDM, PSNR and AWGN.

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SURVEY OF PHOTOVOLTAIC TECHNOLOGY SYSTEM SOFTWARE'S

[Paper ID- EEE1003]

A Paper Presented by: Chandragiri Radha Charan
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Abstract

Photovoltaic systems are presenting an alternative source for production of electricity in a sustainable way. Photovoltaic systems present an optimal solution for growing green house emissions which are depleting ozone layer, one of the major concerns in today's world. Due to increase in energy demand and fast depletion of available fossil fueprasadls, renewable energy resources have to be used to meet the requirements of near future. In India solar energy contributes to nearly 5% of production of electrical energy. Photovoltaic technology is advancing in such a way that it might lead to 50% of production of electrical energy. In this paper, survey of several software's has been provided for the Photovoltaic technology which allows sizing of PV system by taking panel and inverter specifications. Orientation, module type and arrangement and placement of inverters are the important parameters for PV technology. On simulation of these parameters output energy and efficiency are provided as result. Additionally load modulation for a year and economic evaluation for the PV system can also be done using these software's. Some software's analyze various PV systems such as grid connected; stand alone systems and solar pumps.

Keywords: Photovoltaic Technology, Energy Demand, Fossil Fuel, Renewable Energy Sources, PV software's.

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FPGA APPLICATIONS TO 3-PHASE 4-WIRE DISTRIBUTION POWER SYSTEMS

[Paper ID- EEE1004]

A Paper Presented by: Dr. K. Srinivas
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Abstract

The Efficiency of present symmetric encryption algorithms mainly depends on implementation cost and resulting performances. In addition to, it is implemented efficiently on a large variety of platforms in distribution power systems. Present symmetric encryption, like the Advanced Encryption Standard (AES) good tradeoff between cost, security and performances power systems harmonics analysis. While this approach is generally the most convenient, there exists context where more specialized ciphers are useful in active power filters. Some present symmetric encryption algorithms are targeted for hardware implementations and shows significant efficiency improvements on these platforms compared to other algorithms for unbalanced non linear load. From these algorithms, consider a general context where we have very limited processing resources (*e.g.* a small processor). It yields design criteria such as: low memory requirements, small code size, limited instruction set, i.e. Scalable Encryption Algorithm (SEA).

Scalable Encryption Algorithm (SEA) follows unusual design principle for unbalanced non linear load, harmonic elimination and calculation of THD. $SE_{An,b}$ is parametric in the text, key and processor size. Where n is plaintext size or key size and b is processor (or word) size. Many algorithms behave differently on different types of load in distribution power systems (*e.g.* 8-bit or 32-bit processors). In opposition, $SE_{An,b}$ allows to obtain a small encryption regularly targeted to any given processor, the security of the cipher being adapted in function of its key size. It also provides efficient combination of encryption and decryption. Those goals are particularly relevant in context where the same constrained device has to perform encryption and decryption operations (*e.g.* authentication). Finally, the simplicity of $SE_{An,b}$ makes its implementation straightforward in power quality problem.

The performance of SEA is investigated in field-programmable gate array (FPGA) devices. For this purpose, loop architecture of the block cipher is presented. The presented architecture is full flexibility for any parameter of the scalable encryption algorithm.

Keywords: FPGA, SEA, non linear loads, DSTATCOM ect

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**A COMPARATIVE ANALYSIS AND THD REDUCTION IN 3-PHASE 4-WIRE UNBALANCED
NON LINEAR LOADS**

[Paper ID- EEE1005]

A Paper Presented by: Dr. K. Srinivas

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Abstract

Power quality problem is the most sensitive problem in a power system. Most of the power pollution issues caused in power system is because of the unbalanced and nonlinear nature of loads. Due to large amount of non-linear equipment, compact and fluctuating loads cause problems of power quality is becoming more and more serious problems with time. To overcome this problem DSTATCOM used for mitigation of harmonics and reactive power compensation. The performance of the DSTATCOM depends upon control strategies.

The algorithm to compensate the nonlinear and loads in three phase four wire distribution system using shunt active power filter. In this algorithm a positive sequence extraction of the supply voltage and the theory Synchronous Reference Frame (SRF) Method were used. Where ever there are large numbers of nonlinear loads, there are harmonics will present in the distribution system. It is not uncommon for THD levels in industrial plants to reach 25%. Normally, THD levels in office settings will be lower than in industrial plants, but office equipment is much more susceptible to variations in power quality. Odd number harmonics (3rd, 5th, 7th, etc.) are of the greatest concern in the electrical distribution system.

In this paper the impact of unbalanced and non linear loads on source are studied and implemented using aforesaid algorithms. Then adding shunt active power filter in parallel to it, the filter currents are generated using SRF method. Hysteresis current controller is used to generate pulses for DSTATCOM. The THD analysis is done for 3 phase 4 wire systems and neutral current is observed balanced.

Key words: DSTATCOM, non linear loads, shunt filters ect

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Date: 31st January 2016

BANDWIDTH EFFICIENT ON-DEMAND ROUTING PROTOCOL FOR MANETS

[Paper ID- CSE1006]

A Paper Presented by: P. Swetha & Dr.P Premchand

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A Mobile Ad-Hoc Network (MANET) is an infrastructure less assortment of mobile nodes which will haphazardly modify their geographic locations such that these networks have dynamic topologies which are composed of bandwidth restricted wireless links. To alter communication at intervals in a MANET, a routing protocol is needed to ascertain routes between participating nodes. As a result of restricted transmission range, multiple network hops may be required to alter digital communication between two nodes within the network. Since MANET is an infrastructure less network, every mobile node operates not solely as a host, however additionally as a router as well which forwards packets to alternative mobile nodes within the network. Many routing protocols are projected for MANETs, that disagree within the approach used for locating a replacement route and maintaining a acknowledged route as nodes move. Reactive Routing Protocol (RRP) is a bandwidth-efficient on-demand routing protocol for MANETs. In this protocol the originator node initiates the route search method, whenever it has to send information packets to a target node. Therefore the requirement for a route triggers the method of route search, thus the name Reactive Routing Protocol. RRP is meant to be enforced within the network layer of mobile nodes i.e. within the layer three of ISO OSI reference model. RRP is completely different from alternative prompt on-demand routing protocols, chiefly within the means that it doesn't use any broadcast based methodology for brand new route discovery, however it uses the Incremental Search methodology (ISM), therefore creating it a lot of bandwidth-efficient and reducing the quantity of links traversed for constant routes discovered as compared to a broadcast based methodology.

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GRAPHICAL PASSWORDS USING HARD AI PROBLEMS FOR SECURITY

[Paper ID:CSE1007]

A Paper Presented by: P Swetha & Dr.P Premchand

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A elementary task in security is to make cryptologic primitives supported hard mathematical issues that are computationally uncontrollable. Exploiting hard AI (Artificial Intelligence) issues for security, a brand new paradigm, the foremost notable primitive fabricated is Captcha, that distinguishes human users from computers by presenting a challenge , i.e ., a puzzle , beyond the potential of computers however simple for humans. Captcha is currently a typical web security technique to safeguard on-line email and alternative services from being abused by bots. This paper proposes a replacement security primitive supported hard AI issues , namely , a unique family of graphical password systems integrating Captcha technology, that is named as CaRP(Captcha as gRaphical Passwords). CaRP is a click-based graphical passwords, where a sequence of clicks on a picture is employed to derive a password. unlike other click- based mostly graphical passwords , pictures employed in CaRP are Captcha challenges, and a replacement CaRP image is generated for each login try. In theory, any Captcha theme looking forward to multiple-object classification are often converted to a CaRP theme. CaRPs are designed on each text Captcha and image-recognition Captcha. Text CaRP where a password is a sequence of characters sort of a text password, however entered by clicking the correct character sequence on CaRP pictures. CaRP additionally offers protection against relay attacks, an increasing threat to bypass Captchas protection, whereby Captcha challenges are relayed to humans to unravel. CaRP is strong to shoulder-surfing attacks if combined with dual-view technologies. CaRP offers protection against on-line dictionary attacks on passwords, that are for long-standing a significant security threat for numerous on-line services.

ELECTRICAL PROPERTIES OF MN DOPED BISMUTH FERRITE (BFO)

[Paper ID:PHY1008]

A Paper Presented by: V. Srinivas, A. T. Raghavender, & K. Vijaya Kumar

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Abstract

$\text{Bi}_{1-x}\text{Mn}_x\text{FeO}_3$ ($0 \leq x \leq 0.3$) nano crystalline powders were fabricated using sol-gel auto combustion method. The influence of Mn doping on the leakage current, current density and resistivity properties of the Mn doped BFO was investigated. The X-ray diffraction analysis showed rhombohedral to tetragonal phase transition with the increase of Mn content. The particle size was calculated using sherrer formula and found in the range 17-26 nm. The substitution of Mn in BFO increased leakage current gradually from 0.109 μA for pure BFO ($x = 0$) to 4.885 μA for Mn doped BFO ($x = 0.3$). The current density also increased with Mn doping concentration gradually from 0.31 $\mu\text{A}/\text{cm}^2$ for pure BFO($x = 0$) to 22.2 $\mu\text{A}/\text{cm}^2$ for Mn doped BFO($x = 0.3$) where as the resistivity decreased from 2200 $\text{M}\Omega$ for pure BFO ($x = 0$) to 62.03 $\text{M}\Omega$ for Mn doped BFO ($x = 0.3$). These materials may offer a wide opportunity for potential applications in information storage, spintronic, sensors etc, where both electric and magnetic polarizations can be coupled, giving enough opportunity for manipulating devices.

Keywords: Mn doped BFO; leakage current; current density; resistivity.

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**DESIGN, MANUFACTURING AND ANALYSIS HORIZONTAL AXIS WIND TURBINE ROTOR
BLADE**

[Paper ID:MECH1009]

A Paper Presented by:Dr. K.Vasanth Kumar
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Abstract

The paper presents the design and analysis horizontal axis wind turbine rotor blades to achieve maximum power output, maximum efficiency by reducing power losses by using CFD and FE Analysis. The wind energy is the most common and easily available renewable energy source. Many horizontal axis wind turbines are built, installed and running successfully but the design needs to be improved in order to achieve maximum power output and minimum cost of production. In order to successfully design an efficient wind turbine, the blade contour must take advantage of aerodynamic considerations while the material it is made from provides the necessary strength and stiffness. By investigating the aerodynamic characteristics of a wind turbine blade, the parameters that make up the blade contour are optimized.

The design of the blade is made in such a way that the strength of the blade is high and it can resist higher thrust during high wind speeds consequently increasing the durability of the wind turbine. The cross section of the blade is designed by aerofoil shape using NACA 4 Digit series and NREL'S S-series airfoils. The paper focuses on CFD simulations and FEA analysis on different aerofoil blade designs aerodynamic characteristics and efficiency and structural analysis.

KeyWords: Wind turbine rotor blade design, Aerofoil, contour, NACA 4 Digit, CFD and FEA

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International Conference on Innovative Methods in Engineering Applications, Applied Sciences and
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IMEASMC-2016

Date: 31st January 2016

A WEB AND APP DEVELOPMENT SYSTEM THAT SAVES LIVES OF FARMER

[Paper ID:CSE1010]

A Paper Presented by: Dr. P. Rajesh, Dr. G. Narsimha & Ashok Kumar
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Abstract

Recently, on 6-8-14 at Guntur, A.P, we saw a news paper & we found 15 suicide cases are listed. Among 12 (youth, middle aged with children, farmers) were dead due to cause of pesticides. Not only that many people throughout India selecting an easy option for suicide is pesticides and hanging with a fan. In this paper we address the issues of suicides using pesticides. These are due to selling of pesticides to a single person alone by the shoppers everywhere for forms. We would like to develop a web application system that saves life's of farmers along with provide services to them in easy manner. If we put a condition in order to buy pesticides at least two members are need (one is who buys, another one is closely knows to him) and three messages are sent to their relatives, (one message for their children's even at remote place, one for their near neighbours at home, one for their family member at home). Due to this kind of implications others will know the situations at home and alert the people to save him. These kind of web and app (android, windows) application systems saves life of many Indians.

Keywords: Web Application System, Android And Windows App Development, Cloud, Farmers, Saves Lives, Suicide Cases.

Abstract Proceeding of

**International Conference on Innovative Methods in Engineering Applications, Applied Sciences and
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IMEASMC-2016**

Date: 31st January 2016

**FLEXURAL FATIGUE FAILURE BEHAVIOUR OF KEVLAR/EPOXY AND
KEVLAR/POLYESTER LAMINATED COMPOSITE MATERIALS SUBJECTED TO
FLEXURAL FATIGUE**

[Paper ID:MECH1011]

A Paper Presented by: Dr. K.Vasantha Kumar
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Abstract

The paper presents the study of laminated composite materials for failure behaviour due to flexural fatigue. Today a lot of research is directed to understand the fatigue failure behavior of laminated composites. These materials usage is increasing in all sorts of engineering applications due to high specific strength, stiffness, low weight and corrosion resistance. In isotropic metallic materials when subjected to fatigue loading, failure initiates with crack generation and progresses as the number of cycles increases. In case of fiber reinforced composite materials, fatigue damage is due to fiber breakage, matrix cracking, delamination, and interfacial debonding are the four basic failure mechanisms which are observed in composite materials. Fibre reinforced composite materials are selected for weight critical applications, due to good rating as per the fatigue failure is concerned and these materials are anisotropic in nature. The non linear behaviour of composite materials are complex in nature to understand the true nature of fatigue failure behaviour. The flexural fatigue failure behaviour of fiber reinforced composite materials are not predictable in theoretical approach. Without experimental investigation the failure behaviour never portrays to predict the failure of life and the degradation of strength and stiffness. Present paper is focuses to understand the failure behavior of laminated composites of Kevlar-Epoxy and Kevlar-polyester when subjected to cyclic loading.

Keywords: Kevlar Fibre, Load cell, Eccentric Mechanism, stacking of Lamina,
Stiffness degradation Curve and Failure Behaviour,

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Date: 31st January 2016

ELASTIC PROPERTIES OF MIXED $\text{Ni}_x\text{Zn}_{1-x}\text{Al}_{1.0}\text{Fe}_{1.0}\text{O}_4$ NANOFERRITES

[Paper ID:PHY1012]

A Paper Presented by: D. Paramesh, K. Vijaya Kumar & P. Venkat Reddy

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Abstract

Ni-Zn-Al nanoferrites having the general formula of $\text{Ni}_x\text{Zn}_{1-x}\text{Al}_{1.0}\text{Fe}_{1.0}\text{O}_4$ ($x = 0.0, 0.2, 0.4, 0.6, 0.8, 1.0$) have been successfully synthesized using the sol-gel auto combustion technique and annealed for 5 hours at 600 °C. The XRD clearly showed the single phase spinel structure and EDS confirms the composition. Using Debye-Sherrer formula, the particle size was calculated and found in the range of 15-46 nm. It was clearly observed that particle size decreased with Ni concentration and increased with Zn concentration. The lattice parameter value decreased from 8.334 to 8.281 Å with Ni concentration where as the porosity was decreased from 22.28 to 16.85 with Ni concentration. The elastic properties such as Young's modulus, bulk modulus and rigidity modulus were determined by using the depth-sensing indentation technique. All the elastic moduli were decreased with Ni composition. The hardness of the samples was observed almost constant with Ni composition. The Poisson's ratio increased from 0.2798 to 0.2998 with Ni concentration.

Keywords: Ni-Zn-Al nanoferrites, XRD, EDS, lattice parameter, particle size, porosity, Elastic moduli, Poisson's ratio.

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International Conference on Innovative Methods in Engineering Applications, Applied Sciences and
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Date: 31st January 2016

ENHANCING SECURITY AND PRIVACY PRESERVING FOR BIG DATA

[Paper ID:CSE1013]

A Paper Presented by:P.Radhika Krupalini & G. Dr Narsimha

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Abstract

The biggest challenge for big data from a security point of view is the protection of user's privacy. The problem of implementing proper access controls always persists and any default careless installation would worsen the situation leaving the information open to unauthenticated users. At present, the scale of data in many cloud applications is increasing tremendously in accordance with the Big Data trend, thereby making it a challenge for commonly used software tools to capture, manage and process such large-scale data within a tolerable elapsed time.

The objective of this proposal is to design a framework that completely preserves the privacy of the user. The focus of this proposal is to take adequate measures to anonymize the data before it is stored, removing any unique identifier for a user. This in itself can be a security challenge as removing unique identifiers may not be enough to guarantee that the data will remain anonymous. The anonymized data could still be cross-referenced with other available data following de-anonymizing techniques. Any single technique present today alone is not consistent enough to ensure user data privacy. Hence, we propose a framework that implements a technique using Information Extraction with NLP for identifying the sensitive data and anonymizing them, followed by privacy preserving using predicate encryption mechanism.

The proposed framework focuses on providing a secure way of storing and managing big data which would surely enhance the privacy of the sensitive data with much lesser overheads than the previous frameworks.

Keywords: Big Data, Privacy Preserving, Security

Abstract Proceeding of

**International Conference on Innovative Methods in Engineering Applications, Applied Sciences and
Management Cases
IMEASMC-2016**

Date: 31st January 2016

MICROSERVICES – A NEW APPROACH FOR SOFTWARE DEVELOPMENT

[Paper ID:CSE1014]

A Paper Presented by:Joshi Shripad S.

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Abstract

Microservices is a software architecture and delivery paradigm that tends to refer to developing functionality as a collection of small services, each running in its own process and accessed via a lightweight interface. This paper aims to clarify the implications of selecting this approach, its appropriate usage, that can benefit organizations for integration and delivery functionality.

**DIRECT MACHINE TRANSLATION APPROACH FOR TELUGU TO ENGLISH
TRANSLATION**

[Paper ID:CSE1015]

A Paper Presented by:Joshi Shripad S.

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Abstract

Machine Translation(MT) is a sub-field of computational linguistics that investigates the use of software to translate text or speech from one natural language to another natural language. This paper focuses on two majorly spoken languages Telugu and English where simple sentences of Telugu are translated to English. In the translation process, a shallow parser is used for analysis of the sentence and POS tagger is used to assign each word with its parts-of-speech(pos).The results of this translation are compared to the google translator.

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Date: 31st January 2016

**DGITAL COLOR IMAGE PROCESSING AND SEGMENTATION -STATISTICAL TEXTURE
FEATURE ANALYSIS OF THE HUMAN TONGUE**

[Paper ID:IT1016]

A Paper Presented by: Dr. M. Dhanalakshmi
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The present concept proposes a novel scheme of application of color image processing techniques and statistical texture feature evaluation of tongue image for diagnosis in Indian Ayurvedic medical system. Tongue area segmentation are important contents of preprocess of tongue image, proposed tongue image method discriminates a person with healthy or unhealthy conditions. It consists of two imaging techniques applied sequentially: *first*, segmentation of the tongue image from facial image for extracting the true nature of colors and textures on different parts of the tongue; *second*, computing the statistical texture features to classify, whether the tongue image belongs to a healthy or unhealthy person. The proposed scheme is implemented on a large tongue database. The analysis of the results reveals that proposed method can significantly assist in the tongue diagnosis for the health condition of a person. This proposed method helps in enhancing the scope of tongue diagnosis system in Ayurveda towards consistent and low-priced diagnostic model.

Keywords: Traditional Ayurvedic Tongue diagnosis, Digital Image Processing, segmentation, Color Image Processing, Statistical Texture Feature Analysis.

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**International Conference on Innovative Methods in Engineering Applications, Applied Sciences and Management Cases
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Date: 31st January 2016

DESIGN OF COLD PLATE OF ELECTRONIC COMPONENTS FOR 3 KW HEAT DISSIPATION

[Paper ID:MECH1017]

A Paper Presented by: Shailaja.M

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Abstract

The packaging and thermal management of electronic equipment has become pivotal because of increased power levels and the simultaneous miniaturization of the devices. The ultimate goal of system thermal design is reduction of thermally associated risk to the product. Heat is generated by the flow of electrical current in electronic components; these components are observed to fail under prolonged use at high temperatures. The failure rate of electronics device increases almost exponentially with operating temperature. Therefore for safe working of electronic components the generated heat should be removed. The manufacturer of electronic devices specifies the rate of heat dissipation and maximum allowable component temperature for reliable operation. For low cost electronic equipment, inexpensive cooling mechanism such as natural or forced convection with air as cooling medium is commonly used, for high performance electronic equipment, it is often necessary to resort to expensive and complicated cooling techniques such as liquid cooling systems.

Design of a liquid-cooling system requires sizing of individual components so that the desired flow is delivered to the cold plates and type of cooling liquid, method of manufacturing, cost effective solution. The individual cold plates and heat sinks also need to be designed so as to achieve effective and uniform cooling over the entire surface.

The present work aims at understanding the cooling techniques and effective thermal design methodology for electronic equipment and applying these concepts to a real life problem. The objective behind effective thermal design is to extract heat generated from the electronic equipment, to uncover potential risk areas for the system and to maintain the desired temperature levels.

Distributed flow cold plate and tubed cold plate are considered as the cooling solution of a constant heat flux producing electronic system and the complete cooling system design is presented. For given coolant, its inlet temperature and heat dissipation, outlet temperature of coolant and mass flow rate are estimated. For distributed flow cold plate and tubed cold plate, velocity of flow, pressure drop in pipe line and cold plate, capacity of pump required, refrigeration capacity required are estimated. The surface temperature of the component is determined by summing up all the temperature rises along the heat flow path to the inlet temperature of the coolant.

From the results it was observed that the surface temperature of the component mounted on tubed flow cold plate is less than mounted on distributed cold plate. In addition to this cost of manufacturing of tubed flow cold plate is less compared to distributed flow cold plate. Finally the design was ensured safe working of electronic as the temperature is within permissible limit.

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Date: 31st January 2016

OPTIMIZATION OF DRILLING PARAMETERS ON ALUMINIUM 6082 USING TAGUCHI
METHOD AND ANOVA

[Paper ID:MECH1018]

A Paper Presented by:M.Shailaja

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Abstract

Quality and productivity are two important but conflicting criteria in any machining operations. It is therefore, essential to optimize quality and productivity simultaneously. Optimizing drilling parameters to obtain minimum surface roughness (Ra) and maximum material removal rate (MRR) in drilling is been the challenging task for the researchers. Input parameters such as speed, feed, point angles as well as different cooling conditions mainly affect the surface roughness and material removal rates in drilling. Material removal rate (MRR) and surface roughness of the product prepared by CNC drilling operation are to be studied experimentally and the results obtained are to be interpreted analytically.

The main objective of the present work is to optimize process parameters such as cutting speed, feed, and point angle. Taguchi methods are widely used for design of experiments and analysis of experimental data for optimization of processing conditions. A number of drilling experiments were conducted using the L9 orthogonal array on a single spindle drilling machine. The experiments were performed on aluminium 6082 using HSS twist drills on CNC vertical milling machine. Analysis of variance (ANOVA) was employed to determine the most significant control factors affecting the surface roughness and material removal rate. The cutting speed, feed and point angle were selected as control factors.

After the nine experimental trials, it was found that the point angle was the most significant factor for the surface roughness and that the feed was the most significant factor on the material removal rate.

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Date: 31st January 2016

**(PEO+KBrO₃+Plasticizer)POLYMER ELECTROLYTE AS
A GAS SENSOR**

[Paper ID:PHY1019]

A Paper Presented by: T. Sreekanth

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Abstract

In the last two decades an enhanced advancing field has developed on the basis of the ability of certain high ionic conducting polymers electrolytes. Subsequently, these materials have been utilizing for various application of Science and Technology. In view of this, present research work focused on (PEO+KBrO₃+Plasticizer)ion conducting polymer electrolytes. These polymer electrolyte haven been prepared by using Poly (ethylene oxide) (PEO) complexed with KBrO₃ salt and DimethylFormamide (DMF), Where DMF was used as a plasticizer. (PEO+KBrO₃+Plasticizer)various compositions were prepared in the Wt% ratios (90:10), (80:20) and (70:30) by Solution – Casting technique by using methanol (water-free) as solvent. The complexation of poly (ethylene oxide) (PEO), KBrO₃ and the plasticizer (DMF) have been studied by using X-ray diffraction (XRD). (PEO+KBrO₃+plasticizer) based carbon monoxide gas sensor have been prepared and its gas sensor characteristic were perceived at different temperatures and also at various gas concentrations.

Keywords: Polymer electrolytes, Plasticizer, X-ray diffraction, Gas Sensor.

Abstract Proceeding of
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Date: 31st January 2016

SINGLE PHASE ROOFTOP PV SYSTEMS WITH DIRECT CONTROL AND
FUZZY LOGIC METHODS

[Paper ID:EEE1020]

A Paper Presented by: Chandragiri Radha Charan
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ABSTRACT

Photovoltaic (PV) systems propose an attractive alternative source of generation because these can be placed near to the load centers when compared with other renewable sources of generation. The rooftop PV system is grid connected and supports on load as well as the off grid load with battery backup. The designed system should ensure total utilization of generated power with high efficiency of conversion. The generated maximum power is connected to grid through voltage source converter. It proposes a voltage source converter with single phase Synchronous Reference Frame (SRF) theory based current controlled Pulse Width Modulation (PWM) controller to realize maximum generated power evacuation by maintaining the DC link voltage constant without battery support. The Incremental conductance MPPT algorithm employed to track the maximum power from PV panels under variable temperature and insolation conditions. Incremental conductance MPPT with fuzzy logic controller eliminates the PI control loop and reduces the complexity.

Keywords: Photovoltaic system, Synchronous Reference Frame, MPPT, PWM controller

A STUDY ON PROGRESS OF CRYSTALLINE MATERIALS IN GROWTH AND ITS CHARACTERIZATION

[Paper ID:EEE1021]

A Paper Presented by: V. John Reddy, Dr. P. Venkat Reddy & Dr. R. Padma Suvarna
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Abstract

The crystalline introduces considerable simplifications into the description of structure and the formulation of theories for the physical properties. Two main strategies currently in use for crystal engineering are based on bonding and coordination complex. The Crystalline Structure Design today contains atomic positional parameters for nearly 300 000 crystal structures, and this forms the basis for heuristic or synthon-based or "experimental" crystal engineering. A primary goal of this paper is to understand the structure of materials with the resulting reviews by making this theoretical connection, and able to create predictive models which will help materials, further analyze the nanocomposite structures and anticipate the effects those microstructures.

Keywords: crystalline materials, solid state physics, molecular, nano, composite

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Management Cases
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Date: 31st January 2016

SOFTWARE MAINTENANCE PRODUCTIVITY - FACTORS AND METRICS

[Paper ID:CSE1022]

A Paper Presented by: B. Raja Narasaiah & T. Venu Gopal
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Abstract

Software Maintenance productivity is one of the important aspect that impacts software organizations, software product development, software service provide vendors and time to market of the products/application that are being maintained and are making available to business use. In spite of many studies and research work of Software Engineering on the factors and metrics impacting the software maintenance productivity, it is still an issue as the factors related Software maintenance: either software development/maintenance environment, resources, tools, technical & business domain knowledge, know-how and related measures/metrics and relationships are not clearly established.

Software maintenance - is the process of modifying a software system or component after delivery to correct faults, improve performances or other attributes, or adapt to a changed environment, this paper deals with study of different parameters, factors and metrics impacting the Software maintenance productivity. It also covers the sources of best practices that can be considered based on the software product/services vendors and the business organizations using the software products/services. An attempt is also made in this paper to give the list of factors and metrics including best practices that can be considered, their importance and impact of the same to improve the software maintenance productivity and bring further innovative studies and recommendations.

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Date: 31st January 2016

USING RANDOM LSB STEGANOGRAPHY AND CRYPTOGRAPHY METHODS FOR M-COMMERCE SECURITY

[Paper ID:CSE1023]

A Paper Presented by: Sridhar K, Dr.D Suresh Babu ·Dr.T VenuGopal

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Abstract

M-business is one of the principle branches of e-business. The keeping money industry is among the main divisions in receiving and using the Internet and portable innovation on shopper markets. Portable managing an account is a subset of electronic managing an account which under lies not just the determinants of the managing an account business additionally the extraordinary states of portable business. The advancement of electronic managing an account and portable managing an account administrations by means of different channels has made it conceivable to make new sorts of included quality for clients. Be that as it may, in resentment of their preferences, both are confronting a few difficulties as well. One of these difficulties is the issue of security of these frameworks. This paper presents security of these frameworks utilizing Arbitrary LSB steganography and cryptography system. The proposed strategy is more protected and secure as opposed to utilizing either steganography or cryptographic strategy.

This paper shows secure and imperceptible correspondence in M-keeping money and in addition e-saving money. In this paper rather than directly sending data, it is scrambled first utilizing an encryption calculation and after that this scrambled data is handled to stow away into a picture utilizing a secret word so that stego-picture contains shrouded message which is not in plaintext structure. Another essential point is that scrambled data is covered up into a picture utilizing "Arbitrary LSB Steganography" that is implanting information in non consecutive LSB insertion design with the goal that it is garbled and hard to recognize. The stego-picture is put on a site then the URL of the site is sent to the client. In the wake of accepting the URL, the client downloads the photo by an extraordinary project. The client can separate data from the photo just if the secret key entered is right. This data will be in encoded structure client will decode it utilizing the unscrambling calculation so that client will get obliged data. The proposed plan has been executed utilizing J2EE dialect for e-saving money and J2ME dialect for m-managing an account. Our execution underpins all java empowered mobiles for m-managing an account application.

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Date: 31st January 2016

IMPROVED MULTIBAND SPECTRAL SUBTRACTION METHOD FOR SPEECH
ENHANCEMENT USING ADAPTIVE AVERAGING

[Paper ID:ECE1024]

A Paper Presented by: V.Rajanesh,
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Abstract

Colored noise is the most prevalent noise corrupting the speech mostly in the case of additive noise conditions. Multiband spectral subtraction method is the popular method for combating the colored noise, it is improved by implementing adaptive averaging. The frame of the speech signal obtained after windowing is transformed into spectral domain and divided into six bands, while preserving the phase. If the segmental SNR values in the adjacent bands are within the specified limits their spectra are averaged, otherwise unaltered. Noise is estimated using recursive first order estimation and then spectral over subtraction is applied in each band. Finally the phase preserved earlier is used to extract the enhanced version of the speech signal. The measured parameters used to evaluate the performance of the method are cepstral distance measure and PESQ. They indicate improvement over the existing method.

Keywords: Multi-band spectral subtraction; adaptive averaging;

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Date: 31st January 2016

**IMPROVED ADAPTIVE TWO-BAND SPECTRAL SUBTRACTION TECHNIQUE FOR SPEECH
ENHANCEMENT USING ITERATIVE PROCESSING**

[Paper ID:ECE1025]

A Paper Presented by: V.Rajanesh,
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Abstract

Spectral subtractive technique to realize speech enhancement is the first among the methods in its class. Speech being corrupted by additive noise is the most common cause of need of an enhancement technique. It is proposed to use adaptive two-band spectral subtraction method, where decomposition of speech is carried out into two sections voiced and unvoiced. The stochastic component of voiced speech is extracted by high pass filtering the voiced component by adaptively varying the cutoff frequency. The spectral variance is reduced by estimating separately the spectrum of stochastically unvoiced and the voiced speech using multiple window spectrum estimation. The deterministic component of voiced speech is estimated using single window. Then the basic spectral algorithm of spectral subtraction is carried out using the estimated spectra. These operations are carried out on iterative basis and is found to improve the performance over existing method. The evaluation of the performance of the proposed technique is carried out using objective measures and also using informal listening tests. The objective measures obtained indicate that quality of speech is improved more when compared to intelligibility.

Key Words: Speech Enhancement; Spectral subtraction; Iterative Processing

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**International Conference on Innovative Methods in Engineering Applications, Applied Sciences and Management Cases
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Date: 31st January 2016

Structural Static Analysis of Connecting Rod

[Paper ID:MECH1026]

A paper presented by: Sangamesh B. Herakal¹ & Dr. S. Chakradhara Goud²

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Abstract

The main function of connecting rod is to convert linear motion of piston to reciprocating motion of crankshaft. It is the main component of internal combustion (IC) engine. It is the most heavily stressed part of IC engine. During its operation various stresses are acting on connecting rod. The influence of compressive stress is more in connecting rod due to gas pressure and whipping stress. The Connecting rod is a high volume production from automobile Side. Connecting rod is subjected to more Stress than other engine components. Failure and damage are also more in connecting rod, so stress analysis in Connecting rod is Very important. In this study, detailed load analysis was performed on connecting rod, followed by finite element method in hypermesh and abaqus medium. The maximum stresses in different parts of connecting rod were determined by abaqus. In this work we are investigated the stress, strain deformation.

**A STUDY REVIEW ON METAL MATRIX COMPOSITES USED IN AEROSPACE
ENGINEERING**

[Paper ID:MECH1027]

A paper presented by: Nagalli Raghu¹ & Dr. S. Chakradhara Goud²

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Abstract

Metal composite materials have found application in many areas of daily life for quite some time. Often it is not realized that the application makes use of composite materials. For many researchers the term metal matrix composites is often equated with the term light metal matrix composites (MMCs). Substantial progress in the development of light metal matrix composites has been achieved in recent decades, so that they could be introduced into the most important applications. In traffic engineering, especially in the automotive industry, MMCs have been used commercially in fibre reinforced pistons and aluminum crank cases with strengthened cylinder surfaces as well as particle-strengthened brake disks. This material group becomes interesting for use as constructional and functional materials, if the property profile of conventional materials either does not reach the increased standards of specific demands, or is the solution of the problem. However, the technology of MMCs is in competition with other modern material technologies. Aluminium alloys are mostly used in aerospace engineering because of its light weight (low density). Aluminium matrix composites (AMCs) are potential materials for various applications due to their good physical and mechanical properties. The addition of reinforcements into the metallic matrix improves the stiffness, specific strength, wear, creep and fatigue properties compared to the conventional engineering materials.

Keywords: MMC's, AMC's, Mechanical properties of aluminium alloys, Structural comparison by making MMC's.

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International Conference on Innovative Methods in Engineering Applications, Applied Sciences and
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IMEASMC-2016

Date: 31st January 2016

MULTI LAYERED FUZZY LOGIC CONTROLLER IN WIND POWER GENERATION

[Paper ID: EEE1028]

A paper presented by: Dr R. Kiranmayi Associate Professor, JNTUA College of Engineering, Anantapur
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Abstract

In electrical power generation, wind power generation is getting lot of attention due to its competitiveness, environmental cleanliness and for being safe renewable source of electrical power. The paper investigates the closed loop control of wind generation system using fuzzy logic control. The optimized performance of wind energy system is essential and can be achieved with the help of a controller, as wind availability is statistical in nature. Fuzzy logic control is implemented for changing of generator speed adaptively for wind velocity changes. The layers of the controller are used in obtaining optimal generator speed for maximizing the efficiency of its turbine, for obtaining optimal converter efficiency and fir obtaining robust speed control against varying torques. The performance of the controller is illustrated with MATLAB simulations.

FACTS BASED SCHEME FOR POWER QUALITY

[Paper ID:EEE1029]

A paper presented by: Dr R. Kiranmayi Associate Professor, JNTUA College of Engineering, Anantapur
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Abstract

The power electronic based loads in electrical distribution system offer highly non-linear characteristics. Due to their nonlinearity, the loads cause power quality problems. Hybrid filters mitigate the problems of passive and active filters and provide harmonic compensation. Power quality can be improved by power factor correction and transmission line loss reduction. Improvement in power quality is illustrated using modulated power filter compensator. The performance enhancement is shown through simulations.

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IMEASMC-2016**

Date: 31st January 2016

A REVIEW ON THERMAL BARRIER COATINGS ON GAS TURBINE ENGINE BLADES AND VANES

[Paper ID:MECH1030]

A paper presented by: M. Hanuman & Dr. S. Chakradhara Goud²
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Abstract

Thermal barrier coatings are used to protect blades and vanes in the hot sections of gas turbines. They consist of a thick porous ceramic layer deposited on a alumina forming metallic bond coat in contact with the nickel- based super alloy substrate. They are designed to prolong the components lifetimes or to increase gas temperature, and therefore efficiency. In service, the structure and composition of the various layers evolve, due to sintering of the ceramic layer, oxidation of the bond coat, and inter diffusion phenomena with the substrate. As a result, the properties of each layer are affected, as is the interfacial toughness. These evolutions, combined with applied external stresses, may lead to bond coat rumpling, crack formation at the bond coat/ceramic interface and the ceramic layer may eventually spall off. In addition to these intrinsic degradation modes, interactions with the environment can accelerate the system degradation. This paper reviews the before researches about barrier coatings and discuss about the future implementations by considering present approaches.

Keywords: Thermal barrier coatings, Materials used for barrier coatings, Efficiency of gas turbine.

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**International Conference on Innovative Methods in Engineering Applications, Applied Sciences and Management Cases
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Date: 31st January 2016

Design Of A Multi Purpose Fixture For 4-Axis CNC Machine

[Paper ID:MECH1031]

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Abstract

Many of the parts require sophisticated fixture in order to be machined. A variety of CNC machine brands all of which have differently designed tables. They needed a way of sharing the clamping systems with all of the machines. After reviewing the fixtures and machines, we designed, and tested a clamping system which would eliminate the need for different fixtures for each machine. This means that each time an operation is complete the part, with its current fixture, must be taken out of the CNC machine and re-fixture for the next operation. Information on the CNC machines will be gathered and the similarities and differences of the tables and fixtures will be analyzed. Based on this data a new process and design will be created. Finally, we will look at the effectiveness of the proposed designs and improvements to verify that it will improve the manufacturing process.

In the present design BFW BMV40 CNC machine take in to consideration for developing new fixture design. As a designer the drive table specifications are considered as per the machine developer and rest of the part is considered as per the customer requirement of individual parts.

Different stages of rotor blades take in to consideration to prepare a multiple usage fixture for all clamping requirements.

Keywords: fixtures, 4-axis rotary CNC machines, clamping, time monitoring design optimization

Thermal Analysis of Tubular Heat Exchangers Using ANSYS

[Paper ID:MECH1032]

A Paper Presented by: Basawaraj S. Hasu, Dr. G. V. Satyanarayana Rao, Dr. J. Govardhan & Dr. S. Chakradhara Goud
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Abstract

Tubular Heat exchangers can be designed for high pressures relative to environment and high-pressure differences between the fluids. Tubular exchangers are used primarily for liquid-to-liquid. An attempt is made in this paper is for the Design of shell and tube heat exchangers by modeling in UGNX8.0 by taking the Inner Diameter of shell is 600 mm, length of the shell is 1000 mm and Outer diameter of tube is 12.5mm, length of Tube is 1100mm and Shell material as Steel 1008, Tube material as alloy materials to resist corrosive effect TP439 and AL29-4.

By using modeling procedure Assembly Shell and Tube with water as medium is done. By using ANSYS software, the thermal analysis of Shell and Tube heat exchangers is carried out by varying the Tube materials. Comparison is made between the Experimental results, ANSYS. With the help of the available numerical results, the design of Shell and Tube heat exchangers can be altered for better efficiency.

Extensions-material used for tubes, corrosion resistance, higher thermal heat conductive.

HYBRID STORAGE ON HADOOP FILE SYSTEM

[Paper ID:CSE1033]

A Paper Presented by: D. Sudheer & T. Mothilal
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Abstract:

Big Data is the term to define the complexity of processing the large data sets. Hadoop is the frame work that can process huge amounts of data fastly. Hadoop is designed with two main modules are 1. Hadoop distributed file system (HDFS) and 2. Map Reduce. HDFS will takes care of storage, and Map Reduce will takes care of process the data. Storage structure is more important to efficient processing and reliability. Using multiple databases to store the data on hadoop distributed file system will achieve more efficient query processing on Big Data.

Keywords: BigData, HDFS, MapReduce, block structure.

Abstract Proceeding of

**International Conference on Innovative Methods in Engineering Applications, Applied Sciences and Management Cases
IMEASMC-2016**

Date: 31st January 2016

**A REVIEW ON ORGANIC RANKINE CYCLE WITH RESPECT TO POWER
PLANT ENGINEERING**

[Paper ID:MECH1034]

A Paper Presented by: Srilatha T, Dr. B. Anjaneya Prasad & Dr. S. Chakradhara Goud²

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Abstract

New energy conversion technologies required in order to insure the production of electricity without generating the environmental pollution. An important number of new solutions have been proposed to generate electricity from alternative heat source. Waste heat recovery is one of the most important development fields for the organic Rankine cycle (ORC). It can be applied to heat and power plants (for example a small scale cogeneration plant on a domestic water heater) , or to industrial and farming processes such as organic products fermentation, hot exhausts from ovens or furnaces (e.g. lime and cement kilns), flue-gas condensation, exhaust gases from vehicles, inter cooling of a compressor, condenser of a power cycle, etc. Biomass is available all over the world and can be used for the production of electricity on small to medium size scaled power plants. The problem of high specific investment costs for machinery such as steam boilers are overcome due to the low working pressures in ORC power plants. Another advantage is the long operational life of the machine due to the characteristics of the working fluid, that unlike steam is non eroding and non corroding for valve seats tubing and turbine blades. The ORC process also helps to overcome the relatively small amount of input fuel available in many regions because an efficient ORC power plant is possible for smaller sized plants.

Keywords: ORC, Applications of ORC, ORC to power plant.

Mitigation of Harmonics in Wind Energy Systems

[Paper ID:EEE1035]

A paper presented by: Dr. R. Kiranmayi Associate Professor, JNTUA College of Engineering, Anantapur

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Absract

The power electronic based loads in electrical distribution system offer highly non-linear characteristics. Due to their nonlinearity, the loads cause power quality problems. For sustainable growth, it is necessary to meet the energy needs of the consumers continuously. The necessity can be met by using the renewable energy generation. The renewable sources like wind, solar have lot of potential towards green environment. Injection of wind power to the grid affects the power quality due to its varying nature which can be attributed to change in environmental conditions. The integration of wind power with the existing grid presents technical challenges which require consideration of power quality problems. When active power generation of generator varies due to wind, reactive power and the terminal voltage of the generator are affected. A STATCOM based control scheme is proposed for reducing the harmonics in the grid connected wind energy systems.

Abstract Proceeding of

International Conference on Innovative Methods in Engineering Applications, Applied Sciences and
Management Cases
IMEASMC-2016

Date: 31st January 2016

**MODELING AND CONTROL OF WIND ENERGY CONVERSION SYSTEM WITH
BACK TO BACK CONVERTER**

[Paper ID:EEE1036]

A paper presented by: K. Chiranjeevi & Dr. Y.Sreenivasa Rao
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Abstract

With exhausting of traditional energy resources and increasing concern of environment, renewable and clean energy is attracting more attention all over the world to overcome the increasing power demand. Out of all the renewable energy sources, Wind energy and solar energy are reliable energy sources. Now a day, Wind power is gaining a lot of importance because it is cost- effective, environmentally clean and safe renewable power source compared to fossil fuel and nuclear power generation. In order to meet increasing power demand, taking into account economical and environmental factors, wind energy conversion is gradually gaining interest as a suitable source of renewable energy. In this paper, the modeling of the Wind Energy Conversion System (WECS) with Back to Back converters is developed in MATLAB- SIMULINK environment.

The control objective of machine side converter is to regulate active and reactive power flow and to achieve maximum power point tracking. The control objective of grid side converter is to maintain constant DC link voltage regardless of the changing rotor power.

**Simulation of Z- Source Inverter Fed Induction Motor with Traditional Source
Inverter Systems**

[Paper ID:EEE1037]

A paper presented by: S. Sravan Kumar & Dr. Y.Sreenivasa Rao
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Abstract

This paper presents an impedance-source inverter fed (or Z – source converter) induction motor and its control characteristics compared with other traditional inverters. The impedance source inverter employs a unique impedance network coupled with inverter and rectifier; it overcomes the conceptual barriers and limitations of the traditional voltage-source converter (abbreviated as V-source converter) and current-source converter (abbreviated as I-source converter). By controlling the shoot-through duty cycle, the z-source inverter system provide ride-through capability during voltage sags, reduces line harmonics, improves power factor and extends output voltage range. Analysis and simulation results are presented to demonstrate these features.

**Direct Torque Control of Induction Motor with Space Vector Pulse Width
Modulation**

[Paper ID:EEE1038]

A paper presented by: V. Sathish & Dr. Y.Sreenivasa Rao
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Abstract

The Direct Torque Control (DTC) method is basically a performance enhanced scalar control method. The main features of DTC are direct control of flux and torque by the selection of optimum inverter switching vector, indirect control of stator current and voltages, approximately sinusoidal stator flux and stator currents and high dynamic performance even at standstill. The advantages of DTC are minimal torque response time, absence of coordinate transformations which are required in most of vector controlled drive implementation and absence of separate voltage modulation block which is required in vector controlled drives.

The main objective of this paper is to study on the various techniques of direct torque control (DTC) based on Space Vector Modulation (DTC-SVM) applied to induction motor drive systems. With DTC-SVM, it is possible to achieve fixed switching frequency and low torque ripple, hence overcoming the major drawbacks of conventional DTC.

**DISCRETE SPACE VECTOR MODULATION ALGORITHM BASED
VECTOR CONTROLLED INDUCTION MOTOR DRIVE**

[Paper ID:EEE1039]

A paper presented by: B. Naga Raju & Dr. Y.Sreenivasa Rao
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Abstract

This paper presents a discrete space vector modulation (DSVM) algorithm based vector controlled induction motor drive for reduced torque and current ripples in steady state. The classical vector control algorithm gives good transient and steady state response. But, the complexity involved in the classical vector control is more due to the reference frame transformations. To reduce the complexity, later direct torque control has been developed. But, it gives large steady state ripple. Hence, to overcome the drawbacks of vector and direct torque control algorithms, a simple and novel vector control algorithm is proposed in this paper. The proposed algorithm combines the principles of both control algorithms. The reference currents are calculated based on the vector control. Then, the current error signals will be generated by comparing the actual and reference currents. By using the current error signals, sector information and lookup table, a suitable voltage vector is selected in order to keep the current errors within the hysteresis bands as per the principle of direct torque control. In the proposed algorithm, a 5-level hysteresis controller is used for q-axis current and 2-level hysteresis controller is used for d-axis current. To validate the proposed lookup tables based vector control algorithm, numerical simulation studies have been carried out and compared. The results show the effectiveness of the proposed algorithm.

**WAVELET BASED NEURAL NETWORKS FOR DETECTION, CLASSIFICATION,
LOCALISATION, AND CONTROLLING OF VOLTAGE SAGS USING INTERLINE POWER
QUALITY CONDITIONER**

[Paper ID:EEE1040]

A paper presented by: A. Naga Raju & Dr. Y.Sreenivasa Rao
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Abstract

Vast spread of sensitive loads in power systems results in increasing susceptibility to power quality problems, which makes fast detection and classification and localization algorithms a necessity. A new approach for power quality event detection using Wavelet Multi Resolution analysis (MRA) is presented in this paper.

For Classification, Wavelet transform is utilized to extract feature vectors for various PQ disturbances based on the Multi Resolution Analysis (MRA). These feature vectors then are applied to the Neural Network system. For the compensation of the Voltage Sag an Interline Unified Power Quality Conditioner (IPQC) was employed. The complete simulation was carried out using MATLAB/ Simulink.

**LOVE WAVES IN VISCOUS LIQUID LAYER BOUNDED BY
TRANSVERSELY ISOTROPIC POROELASTIC LAYER AND
POROELASTIC HALF-SPACE**

[Paper ID:MATH1041]

A paper presented by: V. Sravan Kumar & Dr. C. Nageswara Nath
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Abstract

Present paper deals with the study of propagation of Loves waves in a compressible viscous liquid layer of thickness h_2 and co-efficient of viscosity η bounded by an infinite transversely isotropic poroelastic layer and a transversely poroelastic half-space. The equations of motion in transversely isotropic poroelastic solid have been formulated in the frame work of Biot's theory. The frequency equation is obtained and is discussed in the limiting case $h_2 \rightarrow 0$, $\eta \rightarrow 0$ such that the ratio η/h_2 is a constant. Further, frequency equation is observed for a case of the layer is in welded contact with half-space when the thickness of layer is zero for finite co-efficient of viscosity. Several other special cases have been discussed.

**DESIGN OPTIMIZATION AND ANALYSIS OF GEAR ALIGNMENTS FOR
SPECIAL PURPOSE RADIAL MILLING MACHINE BY FINITE ELEMENT
METHOD**

[Paper ID: MECH1042]

A paper presented by: Rayala Prasad & Dr. S. Chakradhara Goud²
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Abstract

Now a days Milling and Drilling operations not uniquely did on single machine. To do both manufacturing operations a small difference in gear box design may give a single option solution to the manufacturers. A liver based shifter used as a differential to change gear systems to perform these two different operations on a single machine.

On the proposed above operations torque generation will play an important role. From the survey taken before thesis base papers it is observed that low torque is good for milling and high torque is good for drilling. Gear box outline will be same for casing to avoid machine space and change in gear alignment by addition of a shifter to perform good results for drilling and milling.

Gear design and gear ratios are theoretically calculated and the whole gear alignment performed in design software CREO 3.0. Simulations and stress analysis by using ANSYS work bench 15.0 and torque generation graphs have been generated.

Key words; Spur gear box, gear alignment, stress on gear tooth, torque calculations.

**COLLABORATIVE FILTERING TECHNIQUE THROUGH SEMANTICS
TO OVERCOME SPARSITY**

[Paper ID:CSE1043]

A Paper Presented by:M. Venu Gopalachari¹, P. Sammula²

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Abstract

Recommender systems(RS) are becoming popular out of web intelligent systems in handling the problem of information overload that usually occurs with the current trend applications such as e-commerce, e-retail etc. User profiling is the key concept in many recommenders that implicitly finds the interests of the user towards the services of the provider. Collaborative filtering technique that is built on ratings given by the user extracted from form the profile is one kind of RS. But the challenging issue with CF is the sparsity of the ratings of a particular item for which the traditional RS just suggests the popular among of all items that reduces the quality of the system. In this regard the proposed RS defined with a model that uses the semantics of the items rather the details of the items in CF technique that can solve the sparsity problem. In order to extract semantics from the user profile the ontology of the domain is used. The experiments have shown the significance of the semantics to avoid sparsity problem for CF technique that not only increases the quality of recommendations but also leads to increase the satisfaction of the user.

**Abstract Proceeding of
International Conference on Innovative Methods in Engineering Applications, Applied
Sciences and Management Cases
(IMEASMC-2016)
Date: 31st January 2016**

**MICROGRIDBASEDRENEWABLE ENERGY SOURCES WITH
ENERGYMANAGEMENT SYSTEM**

[Paper ID:EEE1044]

A Paper Presented by: Bagam Srinivasarao & Dr. Y.Sreenivasa Rao
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Abstract

This paper describes the need for renewable based microgrid and gives the information about characteristic features of a stand alone microgrid. The necessity of energy management system and its performance with microgrid has been explained. Renewable energysources such as wind turbines, Geothermal power, bio-mas and photovoltaic panelrequire perfect control for harnessing maximum availableenergy, energy storage system demands efficient management, and DC-link voltage must be maintained constant. These requirementsare fulfilled by energy management system, thus it provides intelligence to the system and makes the microgridreliable. An isolated renewable microgrid having proposed features and energy management system has been simulated using MATLAB/SIMULINK. The designed system sustains dynamic conditions and simulation results validate feasibility of microgrid and energy management algorithm.

**Abstract Proceeding of
International Conference on Innovative Methods in Engineering Applications, Applied
Sciences and Management Cases
(IMEASMC-2016)
Date: 31st January 2016**

**AN EXPERIMENTAL ANALYSIS ON DESCRIPTORS BASED CONTENT
BASED VISUAL INFORMATION RETRIEVAL**

[Paper ID:CSE1045]

A Paper Presented by: M. Anjan Kumar & Dr. R. Kamalakar
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Abstract

Visual information retrieval is a preceding concept of CBIR, whenever the processing data becomes multimodal it will be treated as visual information like multimedia based images, sound waves, moving objects, animations etc. To handle these multimodal and high definition data shape and orientation based processing is required. This will be facilitated by present CBIR systems. Now VIR becomes CBVIR. Of course we are retrieving visual information but processing with CBIR approaches. In this article we focused on image descriptors to retrieve the contents and contrast the performance with multi model data and evaluation measures.

Key Terms: VIR, CBIR, SIFT, SURF, CBVIR, Descriptor, Detector.