

3.4.3 Number of research papers per teacher in the Journals notified on UGC website during the last five years

Enclosed first page of each journal paper as per the list

(A.Y. 2016-2017)

2016-127
①

SEISMIC DISASTER MITIGATION

¹D.RAMACHANDER, ²BOJJA KOWSHIK REDDY, ³SRINIVAS PRASAD JOSHI, ⁴VANAM GOUTHAM

^{1,2,3,4} M.Tech (Structural Engineering) Assistant Professor, Geethanjali Collage of Engineering And Technology

ABSTRACT- An applied study on different types of construction techniques in order to make a structure complaint and be able to withstand lateral forces.

- Magnitude and intensity of Seismic Waves depends upon the Earth quake, which in turn depends upon the origin of depth...
- Non engineered construction practice resulting in massive collapse of buildings...
- Construction practice not such to resist against such magnitude of earthquakes.
- The only objective of this paper is to discuss regarding preventive construction methods used to resist the structures for Earthquake loads.
- By using **BASE ISOLATION TECHNIQUE, SHEAR WALL TECHNIQUE**, we can reduce the loss of life and property due to the effect of Earthquake....

Base isolation technique is nothing but a simple principle or process of decoupling a sub-structure and a super-structure by various techniques.

INTRODUCTION

- Earthquakes have been a cause of major destruction and fatalities and as the process of urbanization continues at a much faster pace, the consequences of strong earthquake ground shaking are becoming more and more threatening to both life and assets. While earthquake prediction may be of some help, mitigation remains the main focus of attention of the civil society. The review presented in this paper identifies the salient features of earthquake mitigation aspects globally while specifically addressing the engineering aspects.
- Earth quake cannot be predicted neither the magnitude and intensity.
- Aim is to improve the level of construction and educate the people who don't have any idea about seismic resistant construction.
- Massive work done to improve the level of construction especially in rural areas.
- The idea behind the concept of base isolation are quit simple. The concept of base isolation is explained through an example building resting on frictionless rollers. When the ground shakes, the roller freely roll, but the building above does not move. Thus no force is transferred to the building due to the shaking of ground. Simply the building does not experience the earthquake.
- In recent years base isolation has become an increasingly applied structural design technique for buildings and bridges in highly seismic areas. Many types of structures have been built using this approach, and many others are in design phase or under construction.
- Base isolation has advanced rapidly in japan for several reasons. The expenditure for research and development in engineering is high with significant amount designated specifically for base isolation.
- The approval process for constructing a base isolated building is a straight forward and standardized process and the high seismicity of japan encourages the Japanese to favour the long-term benefits of life safety and building life-cycle costs when making seismic design decisions.

2016-17
2019

Partial Replacement of Cement in Concrete with Sugarcane Bagasse Ash and its Behaviour in Aggressive Environments

G. Nithin Kumar Reddy¹, G. Harsha Vardhan², S. Vijaya Bhaskar Reddy³

¹ Department of Civil Engineering, Assistant profecer, Geethanjali College of Engineering

² Department Civil engineering, B.Tech final year, Vardhaman College of Engineering

³ HOD, Department of civil engineering, C M R Technical Campus

Abstract: The researches has shown that every one ton of cement manufacture releases half ton of carbon dioxide, so there is an immediate need to control the usage of cement. On the hand materials wastes such as Sugar Cane Bagasse Ash is difficult to dispose which in return is environmental Hazard. The Bagasse ash imparts high early strength to concrete and also reduce the permeability of concrete. The Silica present in the Bagasse ash reacts with components of cement during hydration and imparts additional properties such as chloride resistance, corrosion resistance etc. Therefore the use of Bagasse ash in concrete not only reduces the environmental pollution but also enhances the properties of concrete and also reduces the cost. This project mainly deals with the replacement of cement with Bagasse ash in fixed proportions and analysing the effect of magnesium sulphate on SCBA blended concrete. The concrete mix designed by varying the proportions of Bagasse ash for 0%, 5%, 10%, 15%, 20%, 25% the cubes are been casted and cured in normal water and 5% magnesium sulphate solution for ages of 7, 28 and 60 days, the properties like slump cone test and compaction factor test for fresh concrete and compressive strength for hardened concrete are verified and results are analysed.

I. Introduction

The present work is to carry out a detailed analysis of the Concrete mix designs for various grades of concrete (M35 and M40) with different percentages of SUGARCANE BAGASSE ASH (0%, 5%, 10%, 15%, 20%, 25%). Cubes are subjected to normal chemical curing and Testing the specimens at various ages. Plotting graphs and comparing the compressive strengths of blended concrete cubes in normal and chemical curing. Ordinary Portland cement is the most commonly used building material throughout the world and it will retain its status in near future also because of demand and expansion of construction industry all over the world. Further the greatest challenge before the concrete construction industry is to serve the two pressing needs of human society, namely the protection of environment and meeting the infrastructure requirements of our growing population Structures which are constructed in aggressive environments are liable to be subjected to acidic attack. One of such major problems is sulphate attack against concrete structures due to which there will be loss of weight and reduction in strength of concrete. Contaminated ground water, seawater, industrial effluents are some of the sources of sulphate that attack on concrete. The use of blended cements have shown a sharp results in resisting the sulphate attack on concrete, sugarcane bagasse ash which shows pozzolanic properties is being used as a partial replacement in concrete in regular intervals of 5% upto 25%. SCBA is being produced from sugar manufacturing units as a waste material which will be grinded to the fineness less than cement for obtaining good bonding between cement and SCBA. This project discusses the very severe exposure of magnesium sulphate on concrete.

Bagasse is a by-product from sugar industries which is burnt to generate power required for different activities in the factory. The burning of bagasse leaves bagasse ash as a waste, which has a pozzolanic property that would potentially be used as a cement replacement material. It has been known that the worldwide total production of sugarcane is over 1500 million tons. Sugarcane consists about 30% bagasse whereas the sugar recovered is about 10%, and the bagasse leaves about 8% bagasse ash (this figure depend on the quality and type of the boiler, modern boiler release lower amount of bagasse ash) as a waste, this disposal of bagasse ash will be of serious concern. Sugarcane bagasse ash has recently been tested in some parts of the world for its use as a cement replacement material. The bagasse ash was found to improve some properties of the paste, mortar and concrete including compressive strength and water tightness in certain replacement percentages and fineness. The higher silica content in the bagasse ash was suggested to be the main cause for these improvements. Although the silicate content may vary from ash to ash depending on the burning conditions and other properties of the raw materials including the soil on which the sugarcane is grown, it has been reported that the silicate undergoes a pozzolanic reaction with the hydration products of the cement and results in a

AN IMPROVED DOARP ROUTING PROTOCOL FOR MOBILE AD HOC NETWORKS

Dr Ch. Ramesh Babu

Professor, Dept of CSE, GCET, Hyderabad, India,
chramesh522@gmail.com

Dr Md. Mastan

Assistant Professor, Dept of CS & MIS, OCMT, Barka, Oman.
mastan.mohammed@omancollege.edu.om

Dr B V Swathi

Professor, Dept of CSE, GCET, Hyderabad, India,
swathiveldanda@yahoo.com

Abstract:

In lightweight hierarchical routing model, Way Point Routing Protocol (WPRP) nodes taken as the number of intermediate nodes for routing the waypoints and the route is separated into segments by the waypoints. Waypoints, including the source and the destination, run a high-level intersegment routing protocol (DSRP), while the nodes on each segment run a low-level intra segment routing protocol (AODVRP). One discrete advantage of proposed model depends on the mobility of a node in the route may out or fails, so instead of removal the whole actual route and discovering a novel route from the source to the destination, only the two waypoint nodes of the broken section have to find a new segment. In contrast, the ZRP and CGSR maintain hierarchies for existing hierarchical routing protocols for the complete network. We maintain initialization intended for WPRP to use DSRP and AODV. Hence it can view as DSRP over AODVRP that is DOARP routing protocol. The MANET's are the set of radio enabled nodes in which it communicates with each other through broadcasting. There is a lack of infrastructure to organize and communicate to NWS because the dynamic configurations of MANETs, finds a recite from a source to a destination when might be very difficult. Most of the modern routing protocols works best based on or demand fashion. It includes the Ad hoc On-demand Distance Vector protocol (AODV) and dynamic Source Routing protocols (DSRP) are the two re-knowled on demand routing protocols for MANETs. It is combined into single hierarchical routing protocol and become two special cases of the proposed protocol. Again, one of the methodologies for DOARP is a multi destination route discovery. By using NS-3 tool these protocols were simulated and compared in terms of average control packets, average routing length, average packet delivery ratio and end to end delay.

Keywords: Routing Protocol; MANETs; NS-3.

1. Introduction

Ad-hoc networks have the ability to maintain networks at anytime, everywhere. MANETs typically a collection of moving nodes which forms a dynamic network temporarily without using existing centralized administration or already available network infrastructure. At this age of research focuses on mobile Ad-hoc networks. The routing protocol does a major role in two hosts or two senders or receivers which we want to send packets, thought it may not able to exchange messages directly. In Ad-hoc networks all the mobile nodes are to be connected dynamically in a random fashion. But all these mobile node of these networks acts as routers and be in a group to identify and maintain the routes for the other ad-hoc nodes in the mobile network. These scenarios become more complex if more mobile nodes are accelerated in the network. The ad-hoc nodes must be routed according to certain protocol and select the best route between the mobile nodes in order to optimize the bandwidth overhead and to enable for providing proper routing, so that it minimize the time required to converge after the topology changes.[1]

176-178

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/318787741>

Comparison of Discrete Wavelet Transform (DWT), Discrete Cosine Transform (DCT) and Stationary Wavelet Transform (SWT) based Satellite Image Fusion Techniques

Article in *International Journal of Current Pharmaceutical Review and Research* · June 2017

DOI: 10.7324/IJCRR.2017.9129

CITATIONS

5

READS

710

3 authors, including:



Dr Dammavalam Srinivasa Rao
VNR Vignana Jyothi Institute of Engineering & Technology

20 PUBLICATIONS 100 CITATIONS

SEE PROFILE



Ramesh Ch
GCET, HYDERABAD

8 PUBLICATIONS 17 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



image fusion using fuzzy and neuro fuzzy logic [View project](#)



Image fusion, classification, analysis [View project](#)

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheerla (V), Keesara (M), R.R. Dist. (A.P.) - 501 301
She

16-12
B



International Journal of Advanced Research in Computer Science

A Peer Reviewed, Bimonthly, Online Journal

E-ISSN:0976-5697

Starting Year: 2010

- HOME
- ABOUT
- LOGIN
- REGISTER
- SEARCH
- CURRENT
- ARCHIVES
- EDITORIAL BOARD
- CONTACT US

Home > Vol 8, No 1 (2017) > Babu

ACCURACYASSESSMENT OF SUPERVISED AND UNSUPERVISED IMAGE CLASSIFICATION OF FUSED SATELLITE IMAGES

Ch Ramesh Babu, M . Seetha, D.Srinivasa Rao, MHM Krishna Prasad

ABSTRACT

Remote sensing techniques have been extensively utilized for recognition of land use and land cover structures. Land evidence can be definitely composed by classification of satellite images in the perspective of their practice. In this paper study area has been classified into five classes i.e. vegetation, agriculture, water body, open area and urban land by classification of fused images obtained from various fusion techniques. The spatial and spectral determinations of various satellite images make availableimprovedevidence with the encouragementof imageprocessing and image fusion of both multispectral and spatial images. The input images fused together are multispectral image and panchromatic images obtained from IRS-1D satellite utilizing LISS III. Matlab 10.0 software has been used for image processing, fusion and classification of the images. The Principal Component Analysis (PCA), wavelet transform, fuzzy and neuro fuzzy techniques arehave been used for image fusion. The resultant images have been classified using the supervised and unsupervised classification techniques,decision tree classifier and K-Meansalgorithms and evaluationconcerning them in standings of their accuracy.

Keywords:fusion,classification,accuracy,PCA,wavelet,neuro fuzzy

FULL TEXT:

PDF

DOI: <https://doi.org/10.26483/ijarcs.v8i1.2876>

REFBACKS

- There are currently no refbacks.



Copyright (c) 2017 International Journal of Advanced Research in Computer Science

AUTHOR DESK

- Submission
- Schedule
- Call for paper
- Author
- Guideline
- Manuscript
- Template
- Copyright Form
- Publication Fee
- Indexing
- Impact Factor

OUR ASSOCIATE JOURNAL

- Journal of Global Research in Mathematical Archives
- Journal of Global Research in Computer Science

OPEN JOURNAL SYSTEMS

JOURNAL HELP

USER

Username

Password

Remember me

Login

NOTIFICATIONS

View

Subscribe

JOURNAL CONTENT

Search

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheerayal (V. Koteswara (M), R.R. Dist. JA. AP - 501 307

16-17 (6)

Journal of Data Mining and Management (e-ISSN: 2456-9437)

HOME ABOUT LOGIN REGISTER CATEGORIES SEARCH
CURRENT ARCHIVES CONTACT US

CURRENT ISSUE

HTML	1.0
RSS	2.0
RSS	1.0

Home > Vol 1, No 1, 2, 3 (2016) > Mahesh

Open Access Subscription Access

[OPEN JOURNAL SYSTEMS](#)

[Journal Help](#)

An Extensive Benchmark Experimental Evaluation of Methods for Multi Label Learning In R

J Uma Mahesh, N Chandrakanth, M Ravinder Reddy

USER

Username

Password

Remember me

Abstract

A smart product is one that is able to immingle with masses. Sensible merchandise does not seem to be solely easy merchandise, however, with a touch of cleverness supplemental to permit the user some flexibility operative. Smart product adapts to the context of the user and does not force the user to adapt to that. Sensible merchandise have a group of properties that creates them distinctive area unit self informative, self organizing, extensible, self property, device capabilities, practicality, integrity, user services, property. The client's ranking or priority whereas shopping for varied sensible merchandise area unit dynamical day by day as a result of advancements in technology and customer principally target the advanced options of the sensible merchandise they are shopping for. This paper principally shows, however, affectively sensible merchandise area unit utilized by the shoppers and area unit hierarchic based mostly upon their performance by exploitation R language and WEKA. By using R we can have a deep analysis over the various smart products and the user can be able to know the most widely purchased smart products according to their ranking. We can have deep analysis of smart products using data mining classification and prediction techniques such as J48, Random Forest machine learning algorithms in WEKA and R Language. R allows wide number of smart products data and analyzes with in limited resources. The WEKA and R language is opted to see the classification and prediction performances. Four measures (sensitivity, specificity, accuracy, F-measure) of performance here considered are based on confusion matrix/Error Matrix of R and WEKA, table of counts revealing the performance of each algorithm's confusion regarding the true classifications and predictions. The observation of all the four performance measures used to analyze the smart products use.

SUBSCRIPTION

Login to verify subscription

NOTIFICATIONS

- [View](#)
- [Subscribe](#)

JOURNAL CONTENT

Search

Search Scope

All

Browse

- [By Issue](#)
- [By Author](#)
- [By Title](#)
- [Other Journals](#)
- [Categories](#)

Full Text:

[PDF](#)

FONT SIZE

Refbacs

- There are currently no refbacs.

INFORMATION

- [For Readers](#)
- [For Authors](#)
- [For Librarians](#)

PRINCIPAL
Geethanjali College of Engg. Tech.
 Cheeryal (V), Keesara (M), R.R. Dist. (A.P.) - 501 301.

16-17
①

Journal of Data Mining and Management (e-ISSN: 2456-9437)

HOME ABOUT LOGIN REGISTER CATEGORIES SEARCH
CURRENT ARCHIVES CONTACT US

Home > Vol 1, No 1, 2, 3 (2016) > Mahesh

Open Access Subscription Access

Data Analytics in Abroad and Indian Education System-Using Data Mining Classification Techniques by R Language

J Uma Mahesh, N Chandrakanth, M Ravinder Reddy

Abstract

Education System in recent years has been a progression, in Indian and Abroad Education system. In selecting the next education establishment by the scholars. The most key terms of selecting associate in nursing institute area unit pursue data, institute enfranchisement, institute ranking, freshman retention, graduation rates and strength of the college resources, location, feel of field life, placement records, analysis activities, course length, course outcome, educational offerings, activities and sports, price of the provision of economic aid and etc. This paper proposes to handle the coed quality in choosing an establishment to pursue educational activity in abroad/India supported the on top of mentioned key terms by having a deep analysis victimization data processing, classification and prediction model techniques victimization R language with Rattle Package.

Full Text:

PDF

Refbacs

- There are currently no refbacks.

CURRENT ISSUE

RTOM 1.0
RSS 2.0
RSS 1.0

[OPEN JOURNAL SYSTEMS](#)

[Journal Help](#)

USER

Username

Password

Remember me

SUBSCRIPTION

Login to verify subscription

NOTIFICATIONS

- [View](#)
- [Subscribe](#)

JOURNAL CONTENT

Search

Search Scope

All

Browse

- [By Issue](#)
- [By Author](#)
- [By Title](#)
- [Other Journals](#)
- [Categories](#)

FONT SIZE

INFORMATION

- [For Readers](#)
- [For Authors](#)
- [For Librarians](#)

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheerla (V), Keesara (M), R.R. Dist. (A.P.) - 501 301



PERFORMANCE ASSESSMENT OF FUZZY AND NEURO FUZZY BASED ITERATIVE IMAGE FUSION OF MEDICAL IMAGES

¹ Dr . K. SRINIVASA REDDY , ²Dr. CH.RAMESH BABU., ² Dr D. SRINIVASA RAO, ³G.Gopi

¹ Professor, Dept. of CSE, IARE, Hyderabad, India

² Professor, Dept. of CSE, GCET, Hyderabad, India

² Associate Professor. Dept. of IT, VNRVJIET, Hyderabad, India

³ Akamai technologies, Hyderabad, India

E-mail: ¹ kondasreenu@iare.ac.in., ² crb.challagundla@gmail.com, ² srinivasarao_d@vnrvjiet.in,
³ gumma.gopi@gmail.com

ABSTRACT

Medical image fusion is a significant job to regain an image which delivers as much as evidence of the same body part at the similar time it also assistances to decrease the storing capability to a particular image. In this paper an assessment is completed between conventional image fusion methods; principal component analysis (PCA), discrete wavelet transform (DWT) and the projected fuzzy and neuro fuzzy based iterative image fusion techniques. The proposed method fuses images based on fuzzy inference system (fis) prepared. Experimentations have been finished on two different sets of multimodal medical images of brain. The projected technique is perceivably and significant related with the present approaches. For the assessment of the projected image fusion technique ten diverse measures is prepared and utilized of, namely Image Quality Index (IQI), Mutual Information Measure (MIM), Fusion Factor (FF), Fusion Symmetry(FS), Fusion Index (FI), Root Mean Square Error (RMSE), Peak Signal To Noise Ratio(PSNR), Entropy(E), Correlation Coefficient (CC) and Spatial Frequency (SF). Assessment outcomes demonstrated that the projected image fusion technique mechanisms improved than any of the conventional image fusion techniques.

Keywords: Medical image fusion; Fusion Index; neuro fuzzy

1. INTRODUCTION

In medical domain, together the characteristics of spectral and spatial data in a single image is extremely preferred by the treatment centres for multiple aspirations like analysis, exploration, supervise, precise diseases analyzing and as well for conduct remedy progression. By means of solitary modality image, it is bit tricky to gain evidence of this kind given that, Computed Tomography (CT) images are the majority accepted for screening bone arrangements and shortage in provided that evidence concerning the goods; at the identical instance. Thus, each particular modality image has its own pitfalls in given that required evidence for the reason that every image is obtained with unusual emission control. So as to conquer this it is extremely essential to attain evidence from multiple modalities which are utilized for medical analysis. This fused evidence of image is

utilized in many domains for instance Medication, Cultivation, Aeronautics, Law Enforcement etc. Numerous techniques for conducting fusion Magnetic resonance imaging (MRI) and Positron emission tomography PET images by now had been available. On the other hand, it has a stern side achieve of color deformation. Different determination originate techniques be planned to produce output through low pigment deformation however requiring the difficulty of misplaced exhaustive organizational evidence. Medical domain needs images with complete, precise, consistent and accurate information. Images obtained from different sources are not ready for analysis/ investigation. Hence an effective image fusion procedure is required to generate a fused image with enhance spatial and spectral evidence as well.

Multimodal medical image fusion is a vital function in medical diagnostics and handling health conditions. Extensively utilized transform domain found

16-17 (2)

[View article](#)

[SIGN IN](#)



Dr. D S R Murthy

A HYBRID PARALLEL HASH MODEL BASED ON MULTI-CHAOTIC MAPS FOR MOBILE DATA SECURITY.

Authors B Madhuravani, DSR Murthy

Publication date 2017/2/15

Journal Journal of Theoretical & Applied Information Technology

Volume 95

Issue 3

Description Today, with the advancement of internet and technology security of information has become the prime concern in mobile and online applications. Extensive amount of research have been carried out since years to provide secure and reliable hash functions for information interchange. Chaos based hash functions have gained a lot of attraction by the researchers due to its non-linearity, randomness and unpredictable results. Various chaotic based hash functions have been implemented in the past decade to achieve confidentiality, integrity and authentication. But, most of the traditional chaos based hash functions are processed in sequential approach with a single dimensional map, which restricts their execution speed and performance in the mobile computing applications. To overcome these problems, a novel parallel chaotic hashing model is proposed in this paper. This model integrates multiple chaotic maps ...

Total citations Cited by 8

2017 2018 2019 2020 2021

Scholar articles [A HYBRID PARALLEL HASH MODEL BASED ON MULTI-CHAOTIC MAPS FOR MOBILE DATA SECURITY.](#)
B Madhuravani, DSR Murthy - Journal of Theoretical & Applied Information ..., 2017
Cited by 8 [Related articles](#)

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheerla (V), Keesara (M), R.R. Dist. (A.P.) - 501 301

Article

Word Sense Disambiguation Techniques for Indian and other Asian Languages: A Survey

December 2016 · International Journal of Computer Applications 156(8):35-41

DOI:10.5120/ijca2016912507

Authors:



Mulkalapalli Srinivas



Bhimoreddy Padmaja

Professor Jayashankar Telangana State Agricultural University

Request full-text

Download citation

Copy link



To read the full-text of this research, you can request a copy directly from the authors.

Citations (4)

References (30)

Discover the world's research

- 20+ million members
- 135+ million publications
- 700k+ research projects

Join for free

Sponsored videos

No full-text available



To read the full-text of this research, you can request a copy directly from the authors.

Request full-text PDF

Signature
 PRINCIPAL
 Goethanjali College of Engg. Tech.
 Cheeryal (Y), Keesara (M), R.R. Dist. (A.P.) - 501 301

16-17
②

AN EMPIRICAL STUDY OF WORD SENSE DISAMBIGUATION

M.Srinivas¹ and Dr. B.Padmaja Rani²

¹Department of Computer Science & Engineering, Geethanjali College of
Engineering & Technology, Hyderabad, India

²Department of Computer Science & Engineering, JNTU-CEH, Hyderabad, India

ABSTRACT

Word Sense Disambiguation (WSD) is an important area which has an impact on improving the performance of applications of computational linguistics such as machine translation, information retrieval, text summarization, question answering systems, etc. We have presented a brief history of WSD, discussed the Supervised, Unsupervised, and Knowledge-based approaches for WSD. Though many WSD algorithms exist, we have considered optimal and portable WSD algorithms as most appropriate since they can be embedded easily in applications of computational linguistics. This paper will also provide an idea of some of the WSD algorithms and their performances, which compares and assess the need of the word sense disambiguation.

KEYWORDS

Supervised, unsupervised, knowledge-based, WordNet, word sense disambiguation

1. INTRODUCTION

The creatures are using the language as their communication media. Through language information can be exchanged among the races. Verbal communication involves alphabets, words, sentences etc. In almost all natural languages, there are words having different meanings depending on the context. Those words are known as polysemous words making verbal communication ambiguous. Fortunately, human beings resolve the ambiguity instantly depending on the context with lot of ease. But, machines find it as a very difficult problem. This involves processing unstructured textual information to build the appropriate data structures. We determine the most appropriate meaning through analysing the data structures thoroughly. This is known as Word Sense Disambiguation, a common problem in Natural Language Processing (NLP).

This paper is organized as follows: In section II a brief description of WSD, presenting main approaches knowledge based, supervised, and unsupervised disambiguation in sections III, IV, V respectively. In section VI we elaborated on some evaluation measures for assessing WSD systems and conclusion in section VII followed by the references.

2. WORD SENSE DISAMBIGUATION

Word sense Disambiguation is the process of identifying the correct sense of a word that has several meanings in the context in a computational paradigm. Machine translation is one of the most former on growing research topic in computational linguistics. The problem WSD is as complex as most of the difficult problems in Artificial Intelligence and hence it is deemed as an AI complete problem. In 1940's WSD was developed as discrete field in computational

16-12
12

Enabling Public Verification for Secure Distributed Data in the Cloud

Kakkerla Shivakumar

Assistant Professor, Department of CSE Geethanjali College of Engineering & Technology, Hyderabad, Telangana, INDIA

Abstract-Cloud computing provides an economical and efficient solution for sharing data among the cloud users with low maintenance. There is still a challenging issue, due to the frequent change of the membership for sharing data in a multi-owner manner while preserving data and identity privacy from an un-trusted cloud. Here, a secure multi-owner data sharing scheme, named Mona, for dynamic groups in the cloud has been proposed. Any cloud user can anonymously share data with others by providing group signature and dynamic broadcast encryption techniques. Meanwhile, the storage overhead and encryption computation cost of the scheme are independent with the number of revoked users.

Index Terms- Cloud Server, Privacy Preserving Access Control, Attribute-Based Encryption.

I. INTRODUCTION

Cloud concept is nothing but the storage service, but it can also share across multiple users. we firstly prioritizes privacy preserving mechanism because while auditing data from cloud services it's not a secured while that private information is publicly protected by cloud service. Specifically, the group signature scheme enables users to anonymously use the cloud resources, and the dynamic broadcast encryption technique allows data owners to securely share their data files with others including new joining users which protects the confidentiality from the revoked users in the dynamic broadcast encryption scheme. We propose that while any user is accessing the data from cloud it must be secured by unauthorized person or hacker. Cloud is un-trusted file storage, so we utilize encryption based access control for sharing document in the cloud storage service. User's data is encrypted by using cryptographic technique because unauthorized person can hack the user's private data. In this cryptographic technique we uses different algorithms like signature algorithm, key generation algorithm, ring verify algorithm, etc. these algorithms are used in the

cryptographic technique. Users can enjoy high-quality services by migrating local data management systems into cloud servers.

II. LITERATURE SURVEY

A. Privacy-Preserving In the Cloud

In the Existing system, cloud environment provides large space for storing and managing information for the internet application. The TPA is also important mechanism for authentication is done by this system. The TPA verifies the valid and invalid user by evaluating user identity attributes but if the TPA get hacked by some another then the user not get any notification from cloud due to this users may losses the irrivate information or leakage, so this is big drawback of the existing system. In the previous system, for security purpose OTP (one time password) is not generated while the user's verification is done.

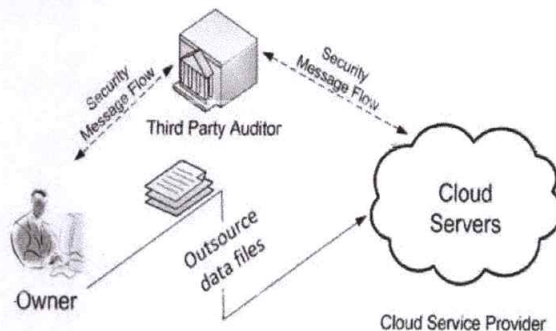


Figure1- System Model Includes The Cloud Server, The Third Party Auditor And Users

Due to the lack of knowledge of decryption keys, the unauthorized users as well as storage servers cannot learn the content od data files. A secure provenance scheme based on the cipher text policy attribute based encryption technique proposed by Lu et al.[3] by setting group with a single attribute. The Deffie-Hellman-key Exchange algorithm is used in previous system. But this is very risky because in this algorithm the man-in-middle-attack was generated so



www.ijatir.org

International Journal of Advanced Technology and Innovative Research

ISSN 2348-1370
Vol.08, Issue.13,
September-2016,
Pages:2529-2533

13

16-17

Encryption Broadcasting and Encrypted Texts

A.MONIKA¹, G.VISWANATH²

¹PG Scholar, Dept of CSE, Golden Valley Integrated Campus, JNTUA, AP, India.
²Assistant Professor, Dept of CSE, Golden Valley Integrated Campus, JNTUA, AP, India.

Abstract: Traditional communicate encryption (BE) plans permit a sender to safely communicate to any subset of individuals however require a trusted gathering to convey decoding keys. Bunch key assertion (GKA) conventions empower a gathering of individuals to arrange a typical encryption key by means of open systems so that lone the gathering individuals can decode the cipher texts encoded under the common encryption key, yet a sender can't reject a specific part from unscrambling the cipher texts. In this paper, we connect these two ideas with a cross breed primitive alluded to as contributory communicate encryption (ConBE). In this new primitive, a gathering of individuals arrange a typical open encryption key while every part holds an unscrambling key. A sender seeing the general population bunch encryption key can confine the decoding to a subset of individuals from his decision. Tailing this model, we propose a ConBE plan with short cipher texts. The plan is turned out to be completely agreement safe under the choice n-Bilinear Diffie-Hellman Exponentiation (BDHE) suspicion in the standard model. Of free intrigue, we introduce another BE plan that is aggregatable. The aggregatability property is appeared to be helpful to build propelled conventions.

Keywords: Contributory Communicate Encryption, Bunch Key Agreement, Provable Security, Communicate Encryption.

I. INTRODUCTION

With the quick progress and pervasive arrangement of correspondence innovations, there is an expanding interest of flexible cryptographic primitives to secure gathering interchanges and calculation stages. These new stages incorporate texting devices, synergistic processing, portable specially appointed systems and interpersonal organizations. These new applications call for cryptographic primitives permitting a sender to safely scramble to any subset of the clients of the administrations without depending on a completely trusted merchant. Communicate encryption (BE) [1] is a very much considered primitive planned for secure gathering focused correspondences. It permits a sender to safely communicate to any subset of the gathering individuals. By and by, a BE framework intensely depends on a completely trusted key server who creates mystery decryption keys for the individuals and can read every one of the correspondences to any individuals. Bunch key assertion (GKA) is another surely knew cryptographic primitive to secure gathering focused interchanges. An ordinary GKA [2]

permits a gathering of individuals to build up a typical mystery key by means of open systems. Nonetheless, at whatever point a sender needs to make an impression on a gathering, he should first join the gathering and run a GKA convention to impart a mystery key to the proposed individuals. All the more as of late, and to defeat this confinement, Wu et al. presented deviated GKA [3], in which just a typical gathering open key is arranged and every gathering part holds an alternate unscrambling key. Be that as it may, neither traditional symmetric GKA nor the recently presented topsy-turvy GKA permit the sender to singularly prohibit a specific part from perusing the plaintext. Consequently, it is crucial to discover more adaptable cryptographic primitives permitting dynamic communicates without a completely trusted merchant.

A. Our Contributions

We introduce the Contributory Broadcast Encryption (ConBE) primitive, which is a mixture of GKA and BE. Contrasted with its preparatory Asia crypt 2011 condition [5], this full paper gives complete security proofs, delineates the need of the aggregatability of the basic BE building square and demonstrates the common sense of our ConBE plan with analyses. In particular, our principle commitments are as per the following. In the first place, we demonstrate the ConBE primitive and formalize its security definitions. ConBE consolidates the fundamental thoughts of GKA and BE. A gathering of individuals communicate by means of open systems to arrange an open encryption key while every part holds an alternate mystery decoding key. Utilizing general society encryption key, anybody can encode any message to any subset of the gathering individuals and just the planned recipients can unscramble. Dissimilar to GKA, ConBE permits the sender to bar a few individuals from perusing the cipher texts. Contrasted with BE, ConBE does not require a completely trusted outsider to set up the framework. We formalize intrigue resistance by characterizing an assailant who can completely control every one of the individuals outside the planned collectors however can't extricate helpful data from the cipher text. Second, we exhibit the idea of aggregatable communicate encryption (AggBE). Coarsely, a BE plan is aggregatable if its protected examples can be totaled into another safe case of the BE plan.

Copyright @ 2016 IJATIR. All rights reserved.

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheerla (V), Keerla (N), R.R. Dist. (A.P.) - 501 308.

16-17 (14)



USER

Username

Password

Remember me

Login

FONT S

JOURN.

Search

Search S

All

See

Browse

By Issue

By Autho

By Title

ARTICL

Print

Index

Home

Find

Email

Email

INFORM

For Reac

For Authi

For Libra

ABOUT

Radhika ,

P. Haritha

S. Rama

HOME | ABOUT | LOGIN | CATEGORIES | SEARCH | CURRENT | ARCHIVES | ANNOUNCEMENTS | E BOARD | PUBLISHER | CONTACT US | ETHICAL CODES | POLICIES | INDEXING | AIMS AND OBJECTIVES | GUIDELINES | PUBLICATION SCHEDULE | PUBLICATION ETHICS | REVIEW PROCESS | INSTRUCTIONS TO REVIEWERS | INSTRUCTIONS TO AUTHORS | ETHICS OF PUBLICATION

Home > Vol 3, No 14 (2016) > Amareshwari

A New Secure Intrusion-Detection System for MANETs

Radhika Amareshwari, P. Haritha, S. Ramanjanyulu

Abstract

The migration to wireless network from wired network has been a global trend in the past few decades. A new technique EAACK (Enhanced Adaptive Acknowledgement) method designed for MANET was proposed for intrusion detection. Due to some special function of Manets only prevention is not good for managing these secure networks. In this case detection should be focused as another part before an attacker can damage the structure of system. Compared to up to date approaches, our approach demonstrates higher malicious-behavior detection rates in sure circumstances whereas doesn't greatly have an effect on the network

Keywords

Digital signature, Enhanced Adaptive Acknowledgment (AACK) (EAACK), Mobile Adhoc Network (MANET).

Full Text:

PDF

SHARE

Copyright (c) 2016 Edupedia Publications Pvt Ltd



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.

All published Articles are Open Access at <https://journals.pen2print.org/index.php/ijr/>

Paper submission: ijr@pen2print.org

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheerl (V), Keesara (M), R.R. Dist. (A.P.) - 501 301

16-12
17



USER

Username

Password

Remember me

Login

FONT S

JOURN

Search

Search S

All

Search

Browse

By Issue

By Author

By Title

ARTICLE

Print

Index

Home

Find

Email

Email

INFORM

For Reac

For Auth

For Libr

ABOUT

Vuppala

Chella Es

M. Sunil

HOME | ABOUT | LOGIN | CATEGORIES | SEARCH | CURRENT | ARCHIVES | ANNOUNCEMENTS | E BOARD | PUBLISHER | CONTACT US | ETHICAL CODES | POLICIES | INDEXING | AIMS AND OBJECTIVES | GUIDELINES | PUBLICATION SCHEDULE | PUBLICATION ETHICS | REVIEW PROCESS | INSTRUCTIONS TO REVIEWERS | INSTRUCTIONS TO AUTHORS | ETHICS OF PUBLICATION

Home > Vol 3, No 14 (2016) > Eswar

A Novel Approach for Security Issues Associated with Big Data

Vuppala Bhavana Eswar, Chella Esther Varma, M. Sunil Kumar

Abstract

This paper introduces a designated analysis of between huge data and cloud computing safety disorders and challenges specializing in the cloud computing varieties and the carrier supply types. Big data is a data analysis methodology enabled through latest advances in applied sciences and structure. However, huge data entails a tremendous dedication of hardware and processing resources, making adoption costs of enormous data science prohibitive to small and medium sized companies. Cloud computing is a set of it offerings which are offered to a patron over a network on a leased groundwork and with the capability to scale up or down their carrier requisites. It benefits includes scalability, resilience, flexibility, effectivity and outsourcing non-core routine. It offers an progressive business model for corporations to adopt it offerings without upfront funding irrespective of the potential positive aspects performed from the cloud computing. the firms are slow in accepting it because of the security problems and associated challenges protection is among the major problems which bog down the development of cloud.

Keywords

Cloud Computing, Big Data, Hadoop, Map Reduce, Hdfs (Hadoop Distributed File System).

Full Text:

PDF

SHARE

Copyright (c) 2016 Edupedia Publications Pvt Ltd



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.

All published Articles are Open Access at <https://journals.pen2print.org/index.php/ijr/>

Paper submission: ijr@pen2print.org

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheerl (V), Keesara (M), R.R. Dist. (A.P.) - 501 303

16-17
16

A Novel Approach for Identification of Hadoop Cloud Environment

Chella Esther Varma, Associate Professor,
Vuppala Bhavana Eswar, Assistant Professor,

M.Sunil Kumar, Assistant Professor,
Geethanjali College Of Engineering And Technology, Cheeryal, R.R.Dist.

ABSTRACT: Due to the modern-day tendencies within the discipline of science and technology resulted in the trends of effective information switch, ability of handling colossal data and the retrieval of data efficiently. On account that the data that is saved is increasing voluminously, methods to retrieve relative understanding and protection associated concerns are to be addressed effectively to at ease this bulk data. Additionally with emerging standards of giant information, these security issues are a challenging undertaking. This paper addresses the limitation of comfortable data switch using the principles of data mining in cloud environment making use of hadoopmapreduce. Based on the experimentation achieved outcome are analyzed and represented with recognize to time and space complexity when compared hadoop with non hadoop approach.

KEYWORDS- Big Data, Hadoop, Mapreduce, Cloud Computing, Temporal Patterns

I. INTRODUCTION

The contemporary technological traits witnessed the storage of enormous data and methodologies special towards efficient retrievals. For the reason that this information is on hand are surmounting, safety breaches and upholding the privacy is a foremost trouble. These security issues are way more difficult whilst on the grounds that the data transfers in cloud atmosphere or parallel processing architectures [1]. So as to manage this data effectually ideas of mapreduce [2] is concentrated in the literature. This is as a result of its capabilities of faulttolerance and scalability in conjunction with simplicity.

One other fundamental advantage of highlighting the mapreduce notion is it allows the parallel processing environments which aid not directly in the direction

of colossal data storage [3]. The notion of mapreduce may also be simply implemented utilising hadoop environment [4]. Many methodologies had been discussed in literature [5, 6, 7, 8] to deal with the disorders of safety in client server environment. However among the many restrained algorithms used for safety in dispensed environments Symmetric Encryption is most of the time projected as a result of its robustness and capability [12] of utilization in each 64-bit and 128-bit key format. Within the trendy scenario as a result of the broaden in the rate of application, upkeep of application, storage of application, pressured the clients or manufacturers to undertake cloud computing atmosphere. In this atmosphere the software or data is stored principally within the form of clusters. These clusters will likely be transmitted over a cloud based on the clients request varieties which will also be SAS, PAS and IAS [8]. Among the many different offerings offered by way of the cloud atmosphere, the ordinarily used services comprise providing occasions on demand and offering computational capabilities on demand.

The map shrink concept addressed in this paper helps the dispensed computing for large data units on clusters of computer systems for offering computing ability on demand. To facilitate this carrier hadoop is ordinarily used due to its capacity of handling HDFS records in which data related to exclusive machines alongside the globe may also be saved. Mapreduce is a performance of hadoop which helps in data preprocessing. This preprocessed data can be worthwhile for the effective evaluation of bigdata. Data mining is the exploration of data with the purpose of discovering hidden structure.

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheeryal (V), Keesuru (M), R.R. Dist. (A.P.) - 501 301
Page | 1857

16-12
17



Home > Other

Advanced Automatic Brain Segmentation Techniques for MRI using Hybrid Technique

7 12 Download (0)

LOps Platform

and get early access. Markov ML

177



International Journal of Emerging Technology and Advanced Engineering

Website: www.ijetae.com (ISSN 2250-2459, ISO 9001:2008 Certified Journal, Volume 7, Issue 12, December 2017)

Advanced Automatic Brain Segmentation Techniques for MRI using Hybrid Technique

¹M. Bhavana Eswar

Assistant Professor, Dept. of CSE
Geethanjali College of Engineering and Technology
Hyderabad, Telangana, India

²Esther Varma

Associate Professor, Dept. of CSE
Geethanjali College of Engineering and Technology
Hyderabad, Telangana, India

Abstract—This paper displays a study of cutting edge techniques for dividing the MRI (Magnetic Resonance Imaging) picture of the brain. Division of the brain is a testing errand since it requires more accentuated strategies to separate every one of the districts display in the brain picture. The power contrasts between the diverse districts in the brain MRI picture are less, making it hard to computerize the whole division process. Henceforth, a careful comprehension of the current division calculation is basic for exact division. The division calculations reviewed in this work are Neural Network Model, Self Organizing Maps, Radial Basis Function, Back Propagation, Fuzzy C-Means, Deformable Models, Level Set Models, Genetic Algorithm, Differential Evolutionary Algorithm, Hybrid Clustering and Artificial Intelligence. Such an overview would be useful for specialists working in the field of brain picture division. The paper talks about the complexities in the division calculation and furthermore the difficulties in dividing the brain MRI pictures. The division yields and examination of the current

Brain

Together, the brain and spinal line (the focal sensory system (CNS)) control the physiological and mental elements of our body. For the most part our brain incorporates three noteworthy parts: 1. Brain. It controls considering, learning, critical thinking, feelings, discourse, perusing, composing, and intentional development. 2. Cerebellum. It controls development, adjust, and act. 3. Brain stem. It associates the brain to the spinal rope, and controls essential capacities in human body, for example, engine, tactile pathways, heart, vault and reflexes [1].

The brain is made out of two tissue writes, to be specific dark issue (GM) and white issue (WM). Dark issue is made of neuronal and glial cells, otherwise called neuroglia or glia that controls brain movement and the basal cores which are the

Ads by Google

Send feedback

Why this ad?

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheeruvu (V), Keesara (M), R.R. Dist. (A.P.) - 501 307



16-17-18
18

Life Time Evolution of Wireless Sensor Network in Presence of Energy Hole at Sink

K. Anusha¹, S. Srija²

Assistant Professor, Computer Science Engg, Geethanjali College of Engineering and Technology, Hyderabad, India^{1,2}

Abstract: Wireless sensor networks play vital role in data gathering. They often work in hostile environments where nodes are not having any energy refilling. Therefore the lifetimes of network and energy consumption are very important. The aim of any technique is to increase lifetime of the network with optimizations. The rationale behind this is that the network has sensor nodes that are resource constrained. In this paper we proposed a model used to determine the effects of energy hole and estimate network lifetime in presence of energy hole at sink. Energy hole is characterized and studied in order to find its effect on the lifetime of the network. We used NS2 simulations in order to evaluate our work. The experimental results revealed that the proposed model is useful to determine the life time of WSN.

Index Terms: Wireless Sensor Network (WSN), energy hole, routing, network lifetime, energy efficiency.

I. INTRODUCTION

Wireless Sensor Network (WSN) is a collection of sensor nodes that are located geographically in a distributed environment. The nodes in the network are capable of performing sensing. Typically they capture data from surroundings and send to base station or sink. The sensor nodes thus play vital role in many real world applications like temperature monitoring, surveillance, home monitoring, studying wildlife habitat besides serving other civilian and military purposes. A typical WSN appears as shown in Figure 1. The network can be connected to Internet servers and thus people from remote places can view data collected by sensor network. The problem with such devices in WSN is that they have limited energy with batter power. Once energy is completed, a sensor node gets switched off. Thus the lifetime of the network goes down drastically.

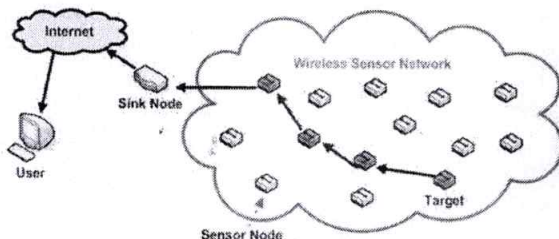


Figure 1: A typical WSN

As shown in Figure 1, the WSN needs to be supported with energy efficient means of communication in order to maximize network lifetime. There are many utilities when network lifetime is monitored and increased. Network lifetime is very important for continued services rendered by deployed WSN. In this context, it is essential to monitor the network for energy efficient approaches and optimizations. In this paper we proposed an analytical model that focuses on estimating network life time and

energy efficiency in order to make well informed decisions. We proposed two algorithms towards this end. We built WSN using NS2 and the proof of the concept is demonstrated. The results revealed that the proposed model is capable of shedding light into the need for evaluating network life time and evolution of energy hole. As energy holes drain the energy of WSN, this study assumes significance. The remainder of the paper is structured as follows. Section II reviews related works. Section III provides details of the proposed system. Section IV provides experimental results. Section V provides conclusions. It also gives directions for future work.

II. RELATED WORKS

Many energy consumptions models in WSN came into existence for improving energy efficiency [1]. Data gathering networks like WSN consumes energy. However, energy efficiency is very important for energy constrained sensor nodes. Many approaches came into existence to have energy efficiency and improve network life time. Network life time analysis was done by many researchers [2], [3], and [4] where the focus was from network initialization to the time the death of first node in the network. It is known as first node died time (FNDDT). Distributed Energy Balancing Routing (DEBR) is an algorithm proposed in [5] for increasing FNDDT. Network life time and cost models are explored in [6] for estimating node dynamics and network longevity. FNDDT was explored in [7] in a WSN where clusters are used with spatial correlation. They used routing protocol to improve energy efficiency. The concept of upper bound derivation for FNDDT is derived in [8] in cluster based WSN for efficient communications.

In [9] FNDDT is highlighted as an important problem that needs to be taken care of for longevity of WSN. It is an

A Comprehensive Survey On Big Data Analytics And Techniques

16-13
19

K.Naresh Babu¹

Asst.prof,Dept of IT ,Geethanjali college of engineering and technology,Hyderabad ,India,
Naresh.kosuri@gmail.com

Abstract:

Big Data has been developing from few years and created hype. But it is quite normal that 3V's (velocity, volume, and variety) are beyond a more thorough discussion of data approach.'Big Data 'is analogous to small data.Though Big data is Having different approaches, methods, tools and architectures,It need to enhance a better way to solve New problems and old problems.Decision makers must be cautious about customer interactions, daily transactions and social network data,inorder to obtain great worth understanding from various and quickly transforming data. The importance of advanced analytics for big data technologies, can be presented in a stochastic manner. Some of the different analysis techniques which can be a implemented on big data,and the Benefits provided by big data analytics in various areas are been analyzed here.

Keywords:Big data, Big data analytics,Big analytics techniques.

1. INTRODUCTION:

The term Big data is the subject of regard from the municipal planners and academics,corporate leaders, and little extent, there is threat also. The unexpected growth in big data has left many surprised. The swift development of big data technologies, left small time for talk for receipt of the idea by the public and private sectors to enhance and grow-up in the educational area.Clearly, Volume plays a major role while answering about Big data[1]. For example, in the Laney (2001), the volume, variety, and velocity (or three V's) challenges in all three dimensions in the data to propose the three V's data describe big management. "Big data is high-volume[2],velocity and variety information assets that request cost-effective,innovative structures of data processing for improved intuition and decision making.

Dr.Suneetha Manne²

Prof and HOD,Dept of IT,Velagapudi Ramakrishna Siddhartha Engineering college,
Vijayawada,India,
Suneethamanne74@gmail.com

How big data is defined? The seven V's form fig.1.1 depicts the importance of Volume, Velocity, Variety, Variability, Veracity, Visualization, and Value
7V'S FOR BIG DATA SUCCESS

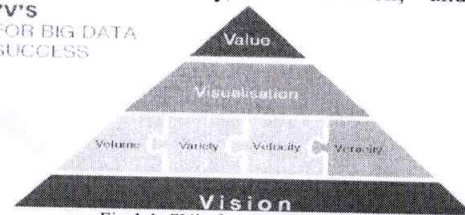


Fig.1.1. 7V's for the success of Big data

Volume

Now, what is measured in Zettabytes (ZB) or Yottabytes(YB) is measured previously in gigabytes(GB). IOT (Internet of Things) is creating a significant growth in data.

Velocity

Velocity is the pace at which the data is accessed

Variety

Variety is one of the main problems with the big data. It is unstructured, which includes various types of information from video to XML and SMS. Especially with the rapid changes in the data it is not simple task to organize the data in a meaningful way.

Variability

It is different from the types of variability. 6 different blends of coffee is offered in a coffee shop, but you get the same mixture every day, and if it tastes different every day, that is the difference. If you are constantly changing, meaning that it has a huge

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheerpal (V), Keesara (B), Dist. Bida. (A.P.) - 501 201

Comparison on Three Different Approaches on Sentiment Analysis

Mrs. Madhuri Agrawal Gupta

Assistant Professor, Geethanjali College of Engineering and Technology,Hyd.
Madhuriagrawal2000@gmail.com

Mrs S. Guru Jyothi

Assistant Professr, Sphoorthy Engineering College,Hyd
Fareenajyothi12@gmail.com

Abstract- This paper introduces the comparisons in between the three different approaches of sentiment analysis. There are three main academic streams on conducting the sentiment analysis task: Symbolic Approach, Supervised Learning Approach and Clustering approach. It is obtained that classification approach is efficient and no manual participation is required for solving the sentiment analysis problems.

Index Terms—opinion mining, sentiment analysis, clustering, supervised learning.

I. INTRODUCTION

Nowadays, social network sites contains a very vast amount of opinion expressing contents such as feedback, reviews, critiques, blogs , comments and so on. All content consists of full valuable information and helps the people to make decision. For example, Movie reviews help the viewers to take decision to go theater or not. Product review helps an enterprise to promote their products. Comments can help to clarify the strategy, etc. However, content is very huge and expressed in natural language. It is very difficult to read and analyze all the content by human. It helps to determine the positive or negative sentiment direction of online text contents and developing such task of technique is called opinion mining or sentiment analysis. It comes under a part of text mining and natural language processing. Sentiment Analysis is important to understand the test business KPIs, to improve customer service, to improve any campaign success or product messaging and to generate the leads. In this paper, different approaches are compared with respect to accuracy, effectiveness and human participation.

II. SENTIMENT ANALYSIS

To determine the positive or negative attitude direction of a writer with respect to a topic based on natural language processing is the main aim of sentiment analysis. The positive or negative attitude may be their mind state, emotional communication, evaluation on the basis of behavior or judgment, opinions, feelings, satisfaction ratings, the quality of shares, re-tweets, comments, replies, rating and also the quality of engagement over time. For example - An opinion is an expression that consists of two key components: target and sentiment. A target is one which we call as topic and sentiment is on the target or topic.

Such as -"I love this office". Here "this office" is the topic and sentiment is expressed by the verb that is "love", which is positive. There are major three types of sentiment analysis.

a. Manual Processing

Most mature and accurate judge of sentiment is done by human interpretation but that also not 100% accurate.

b. Keyword Processing

It assigns a degree or term of positivity, negativity to an individual word then it gives percentage score to text. For example: excellent, great, like, love can treated as positive words while terrible, dislike, not interested are considered as negative. This is very fast process to calculate, easily predictable, cheaper to implement and run as well. There is a major drawback is to deal with double meaning words means dealing with double negatives or positives.

c. Natural Language Processing

Natural language processing dictates a computer system that process human language in terms of its meaning. NLP understands several words. From them make a phrase, from several phrases make a sentence and from several sentences convey ideas.NLP is for analyzing the language for its meaning. Major drawback with NLP is to finding or detecting exaggerated statements and social media acronyms such as omg, b/w etc.

First, need to identify the attitude of the text means the opinion is positive or negative, even few also be classified as neutral. Second, is the identification of text as subjectivity or objectivity class? An objective sentence presents factual information whereas subjective sentence expresses personal feelings, view or their beliefs. For objective sentences positive, negative or neutral classification is helpful while opinion expressing

16-17



Institutional Sign In

All



ADVANCED SEARCH

Journals & Magazines > IEEE Transactions on Geosci... > Volume: 54 Issue: 1

Modeling of Ionospheric Time Delay Using Anisotropic IDW With Jackknife Technique

Publisher: IEEE

Cite This

PDF

V. Satya Srinivas ; A. D. Sarma ; Hema K. Achanta All Authors



17 Paper Citations

384 Full Text Views

Alerts

- Manage Content Alerts
- Add to Citation Alerts

More Like This

- A Wearable Active Antenna for Global Positioning System and Satellite Phone
IEEE Transactions on Antennas and Propagation
Published: 2013
 - Improving Estimation of Vehicle's Trajectory Using the Latest Global Positioning System With Kalman Filtering
IEEE Transactions on Instrumentation and Measurement
Published: 2011
- Show More

Abstract

Document Sections

- I. Introduction
- II. Anisotropic IDW With Jackknife Technique
- III. Prominent Existing Ionospheric Time-Delay Models
- IV. GPS Data Acquisition and Processing
- V. Results and Discussion



Abstract: Transionospheric signals are affected due to the existence of anisotropic plasma in the ionosphere. The precise estimation of ionospheric time delay will play a major rol... [View more](#)

Metadata

Abstract: Transionospheric signals are affected due to the existence of anisotropic plasma in the ionosphere. The precise estimation of ionospheric time delay will play a major role in achieving better positional accuracy. For the first time, a novel model based on anisotropic inverse distance weighting with "Jackknife" technique is proposed, and its performance is evaluated in the context of the Global Positioning System. The performance of the model is compared with three prominent models, namely, the modified planar fit, spline, and Kriging models. Multistation data of a GPS-aided geoaugmented navigation network are used to evaluate the fidelity and sensitivity of the proposed model in near real time. The results due to both quiet and disturbed days are encouraging.

Show Full Outline

Published in: IEEE Transactions on Geoscience and Remote Sensing (Volume: 54 , Issue: 1, Jan. 2016)

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheruvu (V), Kesera (M), R.R. Dist. (A.P.) - 501 301

Single Point Positioning Accuracy of Combinations combined GPS/Galileo

Satya Srinivas Vemuri

Geethanjali College of Engineering and Technology, Cheeryal(V), Telangana, India

Abstract

GNSS provides the position information Geographical Information systems (GIS). The precise positioning capability ensure the successful application of GNSS and its demand for GIS applications. Single point positioning (SPP) is widely used for applications including surveying, Mapping (most common use of GIS) and vehicle navigation. The effect of ionosphere on the GNSS signals is the largest and most unpredictable source of error. The availability of new civilian coded signals on multi-frequency for Galileo (E1, E5a, E5b) and GPS (L2C, L5) systems have given an opportunity to utilize the code-phase measurements to form dual linear combinations to correct for refractive effects due to ionosphere. The advantage of ionosphere-free linear model is that it can be used directly in least squares adjustment to obtain accurate position solution. Code-phase observations are used instead of using carrier-phase observations that are ambiguous. The attainable accuracies of stand-alone GPS and combined GPS/Galileo are evaluated by considering ionosphere-free combinations of civil codes on L1/L2, L1/L5 and E1/E5a frequencies. The results show that attainable positional accuracy of SPP solution is improved. The 3D positional accuracy of combined GPS/Galileo is less than 2 meters.

Keywords: GPS, GALILEO, Ionosphere-free linear combination, Position domain Single point positioning and Position error

1. Introduction

The modern GNSS receivers are designed to track more number of satellites corresponding to different constellations. The interoperability of GNSS and availability of multi-frequency signals of distinct center frequencies with new civilian codes, aid in removal of majority of refractive effects of ionosphere on these signals. The work reported by Cocard and Geiger (1992), Han and Rizos (1996), Odjick (2003) and Richert et al., (2017) is focused in measurement domain and that to using carrier-phase measurements. Taking the advantage of new civilian coded signals of GPS and Galileo, the analysis is carried out to evaluate how these linear combinations affect the positional accuracy. Table1 depicts broadcasting signals and their frequencies of these two systems (Hofmann et al., 2008).

TABLE 1: GPS and Galileo signals

S.No.	GPS	Galileo
1.	L1(1575.42 MHz)	E1 (1575.42 MHz)
2.	L2(1227.60 MHz)	E5a (1176.45 MHz)
3.	L5 (1176.54 MHz)	E5b (1207.14 MHz)

It is envisaged that that all receivers in the International GNSS (IGS) network will be capable of tracking modernized GPS signals (L2C and L5) and Galileo signals to ensure highest- quality of GNSS related standards (conventions), data, and products. Receiver developers are also less interested in codeless and semi-codeless tracking with the availability of new civilian codes on multiple frequencies with backward compatibility to L1C/A. "U.S Airforce intend to discontinue receivers with feature encrypted P(Y) code by 2020". Therefore, the evaluation of accuracy of point positioning using dual-frequency measurements is essential. Single point positioning (SPP) technique involves determining absolute 3D coordinates using standalone GNSS receiver, which is desired in applications such as surveying, geographical Information Systems (GIS), marine (port navigation requirement) and aviation. The main motivation behind undertaking the current research is to understand the reliability of GNSS positional accuracy for SPP with new civilian signals. The investigation aims at study of attainable accuracies due to dual frequency ionosphere-free combinations of new civilian code measurements of GPS and Galileo. The unsmoothed code phase measurements data obtained from receiver are utilized to perform standalone GPS and combined GPS/Galileo single point positioning (SPP) on epoch by epoch basis. An overview of GNSS systems and observation equations used by receiver to compute position are presented in subsequent sections.

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheeryal (V), Kaesara (M), R.R. Dist. (A.P.) - 501 301

16-17

23

Raspberry Pi Based Prototype Surveillance System to Control Process Parameters

A. R. L. PADMAJA¹, K. SOMASEKHAR RAO²

¹PG Scholar, Geethanjali College of Engineering and Technology, Hyderabad, India.

²Professor, Geethanjali College of Engineering and Technology, Hyderabad, India.

Abstract: This project is for implementing the Smart surveillance monitoring system using Raspberry pi Remote Automation. It uses mobile technology to provide essential security for our homes and also to other control applications with Interactive support of the designed system. The proposed system captures information and transmits it via a 3G Dongle/Wi-Fi router to a Smart phone using web application. Raspberry pi operates and controls motion detectors (PIR) and video cameras for remote sensing and surveillance, streams video and records snapshots for future use. At the same time, upon analysis of the video data, the user allows the monitoring person to Remotely automate the electronic appliances at the surveillance area using the (IOT) technology. This allows the application areas to decrease or eliminate human presence to access the physical devices to desired functionality. Raspberry- Pi has two main components interacting with each other: one is the Web Application that executes on the mobile device's browser and server-side scripts that run in either a cloud system or local web-server which will be operated by the Raspberry Pi.

Keywords: USB Cameras, PIR Sensor, Raspberry Pi, Relay, Wi-Fi Router, Smart Phone.

I. INTRODUCTION

This project is a basic application of Raspberry Pi for providing Smart Surveillance with Remote Automation of electronic appliances. This proposed system unlike other surveillance systems offers Remote automation of the electronic appliances with respect to events at the surveillance area. This feature is implemented using the (IOT) technology to smartly automate electronic appliances from a mobile phone using HTML based GUI. This System streams the video to the users mobile as well as store the images for future use based on PIR detection. The proposed system is interactive, efficient and flexible according to the consumer needs. It continuously provides the surveillance data from the application area along with Remote Automation of the electronic components. The proposed system has been tested practically using electric bulbs or DC motor based GATE as switching signal indicators, which can be seen in the presented results.

II. FUNCTIONAL DESCRIPTION

The functions of the various components are given below:

A. USB Camera

Two USB Cameras are used in this project. One USB camera captures the image and sends it to the USB port of the Raspberry Pi board. Other USB camera captures the video in the surveillance area for streaming purpose. The camera model used here is USB Camera model 2.0.

B. Raspberry Pi

Raspberry pi is a small credit-card sized computer capable of performing various functionalities such as in surveillance systems, military applications, etc. The various functionalities of the components are given below Fig.1. The various components of Raspberry- Pi are SD Card Slot is used to install OS/booting/long term storage .The total memory of the SD card is about 8GB. Micro USB Power Port provides 700mA at 5A. Ethernet Port is used to connect to the Internet. It also Plays a role in updating, getting new software easier. HDMI OUT (High Definition Multimedia Interface) is used with HDTVs and monitors with HDMI input. Also HDMI-HDMI is used here. BROADCOM BCM 2835: It is otherwise defined as System on chip .It is a 700 MHz Processor. It has a Video core IV GPU. GPIO allows us to control and interact with real world.

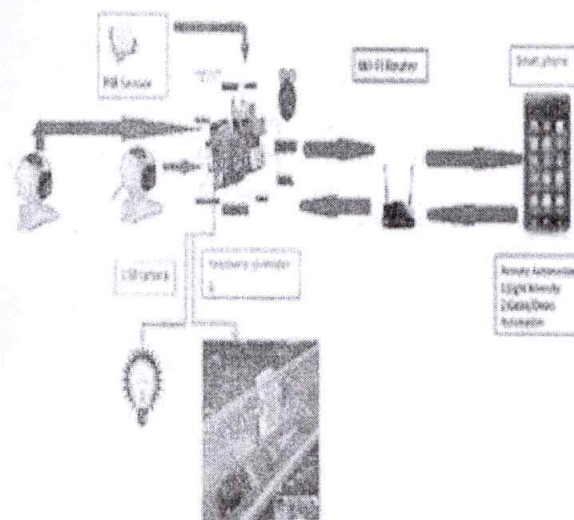


Fig.1. System Design.

Copyright @ 2016 IJATIR. All rights reserved.



PRINCIPAL
Geethanjali College of Engg. Tech.
Cheeruvu (V), Keesara (M), R.R. Dist. (A.P.) - 501 301

5 May 2016

Experimental investigations on range-resolved refractive index structure parameter C_n^2 , by optical measurements over a 2.0 km free space laser path

P. Sudhakar ([/profile/Sudhakar.Pillodi-250718](#)), K. Anitha Sheela, D. Ramakrishna Rao, Malladi Satyanarayana ([/profile/Malladi.Satyanarayana-14496](#))

Author Affiliations + ()

Proceedings Volume 9879, Lidar Remote Sensing for Environmental Monitoring XV: (/conference-proceedings-of-spie/9879.toc) 987919 (2016) <https://doi.org/10.1117/12.2223418> (<https://doi.org/10.1117/12.2223418>)

Event: SPIE Asia-Pacific Remote Sensing (/conference-proceedings-of-spie/browse/SPIE-Asia-Pacific-Remote-Sensing/2016), 2016, New Delhi, India

ARTICLE

FIGURES & TABLES

REFERENCES

CITED BY ▼

Abstract

There is growing interest in development of electro-optical systems capable of operation over long atmospheric distances in various atmospheric conditions. Some of these systems include laser communications, remote sensing, active and passive imaging, target tracking and designation and laser beam projection (directed energy) systems. As increasingly sophisticated electro-optical systems are used in the atmosphere, the character of the medium becomes important. Optical turbulence is one of the most important characteristics for propagation through the atmosphere. A single ended experimental setup using the Nd: YAG laser operating at 1064nm is used to study the temporal and spatial variations of refractive index structure parameter C_n^2 experimentally. In this paper we present the details of the experimental setup used for the measurement of range resolved refractive index structure parameter C_n^2 , over a two way slant 4.0 km free space laser path. Some of the results obtained using the experimental setup are presented and discussed.

© (2016) COPYRIGHT Society of Photo-Optical Instrumentation Engineers (SPIE). Downloading of the abstract is permitted for personal use only.

Citation [Download Citation](#) ▼

P. Sudhakar ([/profile/Sudhakar.Pillodi-250718](#)), K. Anitha Sheela, D. Ramakrishna Rao, and Malladi Satyanarayana ([/profile/Malladi.Satyanarayana-14496](#)) "Experimental investigations on range-resolved refractive index structure parameter C_n^2 , by optical measurements over a 2.0 km free space laser path", Proc. SPIE 9879, Lidar Remote Sensing for Environmental Monitoring XV, 987919 (5 May 2016); <https://doi.org/10.1117/12.2223418> (<https://doi.org/10.1117/12.2223418>)

ACCESS THE FULL ARTICLE

PROCEEDINGS
8 PAGES

DOWNLOAD PAPER

SAVE TO MY LIBRARY

SHARE

GET CITATION

CITATIONS

Cited by 2 scholarly publications.

[Explore citations on Lens.org](#)

(<https://www.lens.org/lens/scholar/article/032-445-382-537-180/main>) ↗

Advertisement

Advertisement

PRINCIPAL
Geethanjali College of Engg. Techn.
Cheeraj (V), Kessara (H), R.K. Dist. (A.P.) - 501 301

2016 25

Multi-wavelength dual polarisation lidar for monitoring precipitation process in the Cloud Seeding Technique

P Sudhakar^a, K Anitha Sheela^b, D Ramakrishna Rao^a, Malladi Satyanarayana*^a

^aDepartment of ECE and R&D Centre, Geethanjali College of Engineering and Technology, Cheeryal (V), Keesara (M), Hyderabad-501301, India.

^bDepartment of ECE, JNTUH College of Engineering Hyderabad (Autonomous), Hyderabad – 500085, India

*Corresponding author E-mail: drsatyanarayana.malladi@gmail.com

ABSTRACT

In recent years weather modification activities are being pursued in many countries through cloud seeding techniques to facilitate the increased and timely precipitation from the clouds. In order to induce and accelerate the precipitation process clouds are artificially seeded with suitable materials like silver iodide, sodium chloride or other hygroscopic materials. The success of cloud seeding can be predicted with confidence if the precipitation process involving aerosol, the ice water balance, water vapor content and size of the seeding material in relation to aerosol in the cloud is monitored in real time and optimized. A project on the enhancement of rain fall through cloud seeding is being implemented jointly with Kerala State Electricity Board Ltd. Trivandrum, Kerala, India at the catchment areas of the reservoir of one of the Hydro electric projects. The dual polarization lidar is being used to monitor and measure the microphysical properties, the extinction coefficient, size distribution and related parameters of the clouds. The lidar makes use of the Mie, Rayleigh and Raman scattering techniques for the various measurement proposed. The measurements with the dual polarization lidar as above are being carried out in real time to obtain the various parameters during cloud seeding operations. In this paper we present the details of the multi-wavelength dual polarization lidar being used and the methodology to monitor the various cloud parameters involved in the precipitation process. The necessary retrieval algorithms for deriving the microphysical properties of clouds, aerosols characteristics and water vapor profiles are incorporated as a software package working under Lab-view for online and off line analysis. Details on the simulation studies and the theoretical model developed in this regard for the optimization of various parameters are discussed.

Keywords:

Cloud seeding, precipitation, rain enhancement, dual polarization lidar

1. INTRODUCTION

Water is one of the most important commodities required by mankind for its survival. As the majority of the population in our country is traditionally involved in agriculture and related activities, the prosperity and well being of the people depend to a large extent on the abundance of the available water resources. The main source of water is the rainfall received during the two prominent monsoons touching the various parts of the country every year. The monsoon water cycle is the life line of over 60% of the country's population. But due to the ever increasing demands of water for agricultural and industrial sectors coupled with the growing population, the water resources are found to be inadequate. The monsoon activity and the resulting rainfall is not sufficient to meet the needs of water in the country. Even 5 to 10% below normal rainfall during the season will have serious effects on the economy of the country. Also the rainfall is not uniform in all the regions in the country and some of the locations receive inadequate rainfall even during a good monsoon in a particular year. As such drought conditions prevail in such regions especially when the monsoon activity is delayed or weak in a particular year.

The major component of the weather modification technology is the use of "Cloud seeding" to facilitate increased and timely precipitation from the clouds present at that time in the targeted region. It is known that

Lidar Remote Sensing for Environmental Monitoring XV, edited by Upendra N. Singh, Naohiro Sugimoto, Achuthan Jayaraman, Mullapudi V. R. Seshasai, Proc. of SPIE Vol. 9879, 987901 © 2016 SPIE · CCC code: 0277-786X/16/\$18 · doi: 10.1117/12.2223046

SHE
PRINCIPAL
Geethanjali College of Engg. Tech.
Cheeryal (V), Keesara (M), R.R. Dist. (A.P.) - 501 301

2016 (24)

Lidar studies on atmospheric aerosols at a semi-urban station Cheeryal (17.51° N, 78.62° E) near Hyderabad, India

P Sudhakar^a, D Ramakrishna Rao^a, K Anitha Sheela^b, Malladi Satyanarayana^{*a}

^aDepartment of ECE and R&D Centre, Geethanjali College of Engineering and Technology,
Cheeryal (V), Keesara (M), Hyderabad-501301, India.

^bDepartment of ECE, JNTUH College of Engineering Hyderabad (Autonomous),
Hyderabad – 500085, India

*Corresponding author E-mail: drsatyanarayana.malladi@gmail.com

ABSTRACT

It is well established that atmospheric aerosol play a vital role both directly and indirectly in the Earth's radiation budget. The transport of anthropogenic aerosol from the urban locations increases the aerosol loading in the surrounding semi-urban regions. The solid waste disposal in the semi-urban regions also adds up to the total anthropogenic aerosol density in the region. In this study we investigated the aerosol characteristics in the *Cheeryal Village* (17.51° N, 78.62° E), which is located at a distance of about 20 Km in the suburbs of Hyderabad, India. A multi-wavelength laser radar was developed in-house and made operational at this location about 2 years back. The Nd:YAG laser (M/S Bright Solutions, Italy) based multi-wavelength lidar operates at 532 nm and 1064 nm with a pulse energy of 50uJ at both the wavelengths. The two wavelengths are generated coaxially with a pulse width of 10ns and the laser operates up to a PRF of 4 KHz. The receiver system consists of a 360 mm Newtonian optical telescope, 10 nm of interference filters and the Licel GmbH, Germany make 250 MHz Photon Counting recorder. Lidar observations are conducted on relatively clear days during the one year period from January 2014 to December 2014. The aerosol extinction profiles are derived and compared with the model values corresponding to the Hyderabad urban region. It is observed that there is a heavy aerosol loading periodically at this location in relation to the sources of anthropogenic aerosols at Hyderabad urban area. The role of prevailing meteorological conditions, measured in real time, on the transport of the urban aerosol to this region is studied.

Keywords:

Lidar, Remote sensing, Anthropogenic aerosols, Semi-urban region, transport of aerosols

1. INTRODUCTION

In the present day context, modifications in the Earth's climate due to human activities are one of the very important issues in the environmental research. The role of aerosols, particularly anthropogenic type, air pollutants, clouds, water vapor and ozone is not fully understood as yet. A comprehensive study on the characterization of the aerosol properties including their vertical profiles along with the measurement on the concentration profiles of water vapor, ozone and temperature simultaneously will yield valuable information needed for understanding their role in the global climate and its change. The field of laser remote sensing has grown rapidly in recent years. The growth has been stimulated by the potential application of remote sensing systems to a wide variety of atmospheric measurements. Further the fast technological advances in lasers, detectors, signal processing and data acquisition systems taking place are facilitating the development of new techniques and versatile systems which offer very high vertical resolutions and accuracies in measurement. Laser remote sensing of the atmosphere is generally referred to as LIDAR, the acronym for Light Detection and Ranging. Similar to RADAR, in LIDAR, a laser light pulse into the atmosphere and is used as a spectroscopic probe of its physical state and composition. The emitted laser beam interacts with the atmospheric constituents, causing alterations in the intensity, polarization and wavelength of the backscattering light. From the measurement of these parameters of the received backscattered light one can deduce the properties of the atmosphere and its constituents. As the laser is pulsed the lidar methods allows the range resolved measurement to obtain the vertical

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheeryal (V), Keesara (M), R.R. Dist. (A.P.) - 501 301

Lidar Remote Sensing for Environmental Monitoring XV, edited by Upeksa Singh, Nobuo Sugimoto,
Achuthan Jayaraman, Mullanpudi V. R. Seshasai, Proc. of SPIE Vol. 9879, 98790T
© 2016 SPIE · CCC code: 0277-786X/16/\$18 · doi: 10.1117/12.2223391

Implementation of Touch Detection With Virtual Keyboard Using Raspberry Pi

¹V. Venkat Lakshmi, ²B.Ramu, ³G.Keerthi

^{1,2}Assistant Professor, Geethanjali College of Engineering and Technology, Hyderabad, India.

³Assistant Professor, St.Martin's Engineering College, Secunderabad, India.

Abstract— In this paper, we propose a novel interactive projection system (IPS), which enables bare-finger touch interaction on regular planar surfaces (e.g., walls, tables), with only one standard camera and one projector. The challenge of bare-finger touch detection is recovering the touching information just from the 2-D image captured by the camera. In our method, the graphical user interface (GUI) button is projected on the surface and is distorted by the finger when clicking it, and there is a significant positive correlation between the button's distortion and the finger's height to the surface.

Therefore, we propose a novel, fast, and robust algorithm, which takes advantage of the button's distortion to detect the touch action. The proposed touch detection algorithm is performed in three stages: 1) region of interest extraction through a homography mapping, by which the computational complexity of the following processing is reduced; 2) the button's distortion detection using a special edge detection algorithm, which greatly reduces the errors due to the influence of the finger's shadows and edges; and 3) touch action judgment by the button's distortion. Several applications (e.g., virtual keyboard, power point viewing), which use the proposed touch detection method based on the buttons, are shown in this paper. An evaluation is performed on the virtual keyboard and the results demonstrate that the proposed approach can detect bare-finger touch in real time with the missed detection rate of 1.00%, false detection rate of 2.08%, and touch detection rate of 96.92% at the typical projected distance.

Index Terms- Edge detection, human-computer interaction, projector-camera system, touch detection, triangulation.

I. INTRODUCTION

Mobile Devices (e.g., mobile phones, pads) with significant computational power and capabilities have been a part of our daily life. Benefiting from the small size of these devices, they are easy to carry. However, the screen real estate of today's mobile devices is limited by their small sizes. This greatly diminishes their usability, functionality, and comfort. A Pico-projector can be used to significantly increase the limited screen size of the mobile devices. With the development of the projection technology, we believe that embedded projectors in the mobile phones will be very common in the future, and

people will enjoy a way of displaying digital contents on everyday surfaces. Meanwhile, the interactions (e.g., touch, gesture) on the projected display are thought to be appealing. To achieve the touch interaction, the biggest challenge lies in how to determine whether the fingers touch the projected surface or not. Most of the researchers in this area use multi cameras or a depth camera to obtain the relative position between the fingertip and the projected surface.

The existing keyboards used keys based keyboard for typing on the computer. These keyboards are working on the mechanical push principle. But for the small devices like mobile phones and tablets it is impossible to carry big keyboard with them. The touch screen based keyboards available in such devices are very inconvenient to write because the size of people finger is big and the size of the keys on the touch screen is small. So typing work on the small devices is not convenient and on computer our fingers get pain after doing long time typing work because of mechanical vibration of the keys.

II. PROPOSED METHOD

In the proposed method, we propose an interactive projection system (IPS), which enables bare-finger touch interaction on regular planar surfaces (e.g., walls, tables), with only one standard camera and one projector.

The challenge of bare-finger touch detection is recovering the touching information just from the 2-D image captured by the camera.

In our method, the graphical user interface (GUI) button is projected on the surface and is distorted by the finger when clicking it, and there is a significant positive correlation between the button's distortion and the finger's height to the surface.

Therefore, we propose a novel, fast, and robust algorithm, which takes advantage of the button's distortion to detect the touch action.

We design a hardware system on interactive projection system. Our system is designed by using ARM 32-bit micro controller which supports different features and algorithms for the development of automotive systems. Here the camera and projector are connected to ARM controller.

We are projecting a GUI on surface by projector and camera for capturing GUI. The camera will capture the places where user put his finger and the movement of the finger.

DESIGN AND IMPLEMENTATION OF COGNITIVE RADIO COMMUNICATION SYSTEM FOR SHORT RANGE APPLICATIONS USING RASPBERRY PI

T.Shaista Firdose¹

Appala Raju Uppala²

1) T.Shaista Firdose, M.Tech (ES), Geethanjali College of Engineering and Technology, Hyderabad, India.

2) Appala Raju Uppala, Associate Professor, Geethanjali College of Engineering and Technology, Hyderabad, India.

Abstract: Raspberry Pi FM Transmitter similarly as Software-defined radio (SDR) is a radio communication system where components that have been typically implemented in hardware like amplifiers, modulators, demodulators etc are instead implemented by means of software on a personal computer or embedded systems. Here I am implementing SDR in Raspberry pi which enables transmission/Receiver of signals with the help of General purpose-input-output pins and with the help of software. While the concept of SDR is not new, the rapidly evolving capabilities of digital electronics render practical many processes which used to be only theoretically possible. We can establish a FM station with the help of Raspberry Pi based on Cognitive Radio communication in which we can easily transmit our signal without any disturbances. Both Transmission and Receiving is possible with raspberry pi which helps to setup our own communication channel with Cognitive frequency by allocating random frequency.

Keywords: Cognitive Communications, SDR, Raspberry pi-Radio

I.INTRODUCTION

Mostly Software-Defined-Radios are built on PC which has sound card, network drivers, other A/D(analog to digital converter), RF Radios like Wi-Fi, Bluetooth, Ethernet drivers ,signals are handled to the processors like Intel, without using any special hardware. So that the system produces a radio

which can receive frequency ranges based only on the software's used. Software radios have applications in places like for short ranges for military, college radios and cell phone services, both of which must serve a wide variety of changing radio protocols in a real time LIKE Wi-Fi, TCP, UDP.

There are many transmitters to transmit in the same place in the same frequency with very little interference, using error detection and correction techniques to fix all the errors caused by that interference using filters. Software defined antennas adaptively "lock onto" a specific signal, so that receivers can reject signals with other frequency's, allowing it to detect even weak signal Cognitive radio techniques. Each radio measures the spectrum and identifies the specific devices and connect to the specific frequency range, so that transmitters can avoid signals from other radios which work on different frequency's.

A FM radio can be built on raspberry pi development board in which we can build transmitter and receiver which allows specific frequency ranges all this makes a cognitive radio station which won't allow other frequencies

SDR which is build can be operated in different modes dynamically. The software's will make use of all the hardware which works efficiently in all environmental conditions. A cognitive radio system will use set of software's which work on protocols , Although it has many options here we will use it only for the observation, learning,

DESIGN OF LOW POWER-HIGH SPEED BINARY ADDER USING REVERSIBLE LOGIC

Jugal Kishore Bhandari¹, S.KrishnaPriya², Md Touseef Sumer³
^{1,3}Asst Professor, ²Associate Professor - Department of E.C.E,
Geethanjali college of Engineering and Technology, Hyderabad, India.

ABSTRACT: Reversibility plays a fundamental role when computations with minimal energy dissipation are considered. In recent years, reversible logic has emerged as one of the most important approaches for power optimization. A reversible logic design will not result in loss of information; this avoids the unwanted heat generated. For power not to be dissipated in an arbitrary circuit, it must be built from reversible gates. In computers and other kinds of processors, adders are used not only in the ALU(s), but also in other parts of the processor, where they are used to calculate addresses, table indices, and in digital electronics, adder performs addition of two numbers. This research proposes a new implementation of adder in reversible logic. The power requirements of traditional methods used to increase performance are too great. It has been proven that use of traditional irreversible logic gates, leads to power dissipation regardless of underlying technology. The proposed design reduces the number of gate operations compared to the existing adder reversible logic implementations. So, this design gives rise to an implementation with a reduced area and delay. We can use it to construct more complex systems in nanotechnology. The high speed adder circuit using Hardware Description Language (HDL) is constructed and verified in the platform Xilinx ISE 9.2i and synthesized using nc-sim and virtuosio of cadence in 180nm Technology to analyze the design parameters.

Keywords: High Speed Adder, Reversible logic, Garbage output, irreversible gates.

1. INTRODUCTION

The core of every microprocessor, digital signal processor (DSP), and data- processing application-specific integrated circuit (ASIC) is its data path. It is often the crucial circuit component if die area, power dissipation, and especially operation speed are of concern. At the heart of data-path and addressing units in turn are arithmetic units, such as comparators, adders, and multipliers. Finally, the basic operation found in most arithmetic components is the binary addition. Besides of the simple addition of two numbers, adders are also used in more complex operations like multiplication and division. But also simpler operations like incrementation and magnitude comparison base on binary addition. Therefore, binary addition is the most important arithmetic operation. [2] It is also a very critical one if implemented in hardware because it involves an expensive carry-propagation step, the evaluation time of which is dependent on the operand word length. The efficient implementation of the addition operation in an integrated

circuit is a key problem in VLSI design.

1.1 Adder circuits

Several types of adders are used in computing systems. A ripple carry adder has the simplest structure. In a ripple carry adder, full adders connected in series generate the sum and the carry outputs based on the addend bits and the carry input. The disadvantage of a ripple carry adder is that the carry has to propagate through all stages.

1.2 Full Adder

A Full Adder (FA) is a logical circuit that performs an addition operation on three binary digits. The full adder produces a sum and a carry value, which are both binary digits. The logical diagram of full adder is shown in figure 1.

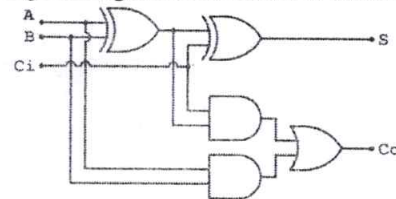


Figure 1. Full adder

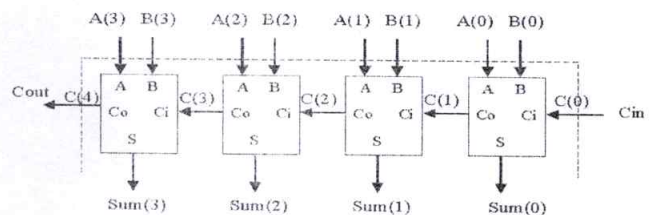


Figure 2. Ripple carry adder

A FA adds binary numbers and accounts for values carried in as well as out. A one-bit full adder adds three one-bit numbers, often written as A , B , and C_i here A , B are the operands, and C_i is a bit carried in (in theory from a past addition by [3]). The circuit produces a two-bit output sum typically represented by the signals C_o (Carry) and S (Sum). The Boolean equation and truth table are shown bellow.

$$(1) S = a \text{ xor } b \text{ xor } c; \quad (2) C_o = ab + bc$$

+ ca ;

1.3 Ripple carry adders

The basic building block of a ripple carry adder is a full adder block. A full adder computes the sum bit S_i and the carry output c_{i+1} based on addend inputs a and b and carry input c . The output expressions for a ripple carry adder are

$$(1) S_i = a \text{ xor } b \text{ xor } c; \quad (2) C_{i+1} = ab + bc + ca ; (i = 0,1,2,\dots)$$

It is possible to create a logical circuit using multiple full adders to add N -bit numbers. Each full adder inputs a carry

A Comprehensive Review: Segmentation of MRI Images – Brain Tumor

Saritha Saladi, Amutha Prabha N.

School of Electrical Engineering, VIT University, Vellore, India

Received 10 March 2016; revised 25 October 2016; accepted 2 November 2016

ABSTRACT: Segmentation of tumors in human brain aims to classify different abnormal tissues (necrotic core, edema, active cells) from normal tissues (cerebrospinal fluid, gray matter, white matter) of the brain. In existence, detection of abnormal tissues is easy for studying brain tumor, but reproducibility, characterization of abnormalities and accuracy are complicated in the process of segmentation. The magnetic resonance imaging (MRI)-based segmentation of tumors in brain images is more enhancing and attracting in current years of research studies. It is due to non-invasive examination and good contrast prone to soft tissues of images obtained from MRI modality. Medical approval of different segmentation techniques depends on the benchmark and simplicity of the method. This article incorporates both fully-automatic and semi-automatic methods for segmentation. The outlook study of this article is to provide the summary of most significant segmentation methods of tumors in brain using MRI. © 2016 Wiley Periodicals, Inc. *Int J Imaging Syst Technol*, 26, 295–304, 2016; Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/ima.22201

Key words: magnetic resonance imaging; segmentation; brain tumor

I. INTRODUCTION

Imaging analysis of tumors in the brain is to obtain the most prominent information, which helps in clinical diagnosis of the patient for better treatment. In image analysis, errors emerge at feature extraction, display and also in image measurements. Segmentation is the foremost level in medical image analysis (MIA). When growth of the cancer cells is uncontrollable then the disease is named as the tumor. This tumor is of different types and has different characteristics, which are cured with various types of treatments (Gupta and Shringirishi, 2013). Medical image segmentation of brain is the labeling process indicating tissue type or anatomical structure of each pixel/voxel. These segmentations have application in conception and interpretation of the disease. Segmentation can be on biological parts of the human body such as the blood vessels, the brain, the pelvis, the heart, the spine, the knee, and the prostate. Segmentation purpose is to extract richer information from the original medical images. The major intention of segmentation is to divide an image

into homogeneous and non-overlapping regions of comparable properties such as intensity, depth, color, or texture. The brain segmentation results in either an image of labels that identify the region boundaries in terms of homogeneous regions or a set of contours. The noise, bias field, and partial volume effect are the difficulties and a challenging task in the process of segmenting the brain images. Magnetic resonance imaging (MRI) modality is most popular in obtaining complete details of images of different parts of the brain. Also, it is well-known for analysis and detecting abnormal changes in the tissues with high contrast when compared with other modality named computerized tomography (CT). Acquisition parameters of MRI can be adjusted for different tissues to obtain different gray values. Most of the researchers use MRI images for segmentation in clinical applications. The present study is concentrated on tumors located in brain. In particular, these tumors occur when abnormal tissues are found in some parts of the brain.

Methods of brain segmentation are categorized based on different principles. Brain segmentation of normal tissues is shown in Figure 1. For the medical use, the MRI segmentation methods are grouped as

- i. Manual segmentation
- ii. Semi-automatic segmentation
- iii. Fully-automatic segmentation
- iv. Hybrid segmentation.

Manual segmentation refers to that when an expert human operator labels the image and segments the boundaries which are perceptually valid. This segmentation aims to paint the regions of the anatomical structures labeling by hand, it is done in the fashion of slice-by-slice volumetric imagery (Pham et al., 2000). The manual segmentation method is said to be more accurate. This technique is used in brain tumor segmentation to draw the boundaries and structures of interest in detecting lesions with different labels.

Practically manual segmentation is not only plodding and error-prone, but also a time-consuming task for the operator to evaluate the results by intra or inter variability studies. Atlas based segmentation methods of different brain structures use the brain atlas of manual segmentation for basic formations (Murgasova, 2008). To overcome the difficulties of manual segmentation, more advanced methods emerged as semi-automatic and fully automatic segmentation methods.

Automatic segmentation refers to the process to segment boundaries assigned automatically by a computer aided system. The

Correspondence to: S. Saritha; e-mail: saladi.saritha2014@vit.ac.in OR N. A. Prabha; e-mail: amuthaprabha@vit.ac.in

PROOF
Geethanjali College of Engg. Tech.
Cheeray (V), Keesara (M), R.R. Dist. (A.P.) - 501 301

Performance Analysis of an OFDM System for Different channel Models

M Ratna Jyothi¹, Aleti Shanker², Chinthala Pavani³

¹Department of Electronics and Communication Engineering

²Geethanjali College of Engineering and Technology, Affiliated to JNTU, Hyderabad.

³Methodist College of Engineering and Technology, Affiliated to Osmania University, Hyderabad.

Abstract- In today's world depending on the requirements in the wireless communication, a system which provides high capacity and high performance and yields lower bit error rate (BER) value is preferred. Orthogonal frequency division multiplexing (OFDM) technique provides high spectral efficiency and transmits data using a number of subcarriers which are dependent on the principle of orthogonality. In this paper, the effect of various fading channels on BER is analyzed which gives the performance of OFDM system and the Doppler Effect on the Rayleigh fading channel is taken into account. Bit error rate among the considered fading channels is observed. With the help of MATLAB, the performance of the system is analyzed and the results are imparted.

Keywords: FFT based OFDM, BER, QAM, AWGN channel, Rayleigh channel, and Rician fading channel.

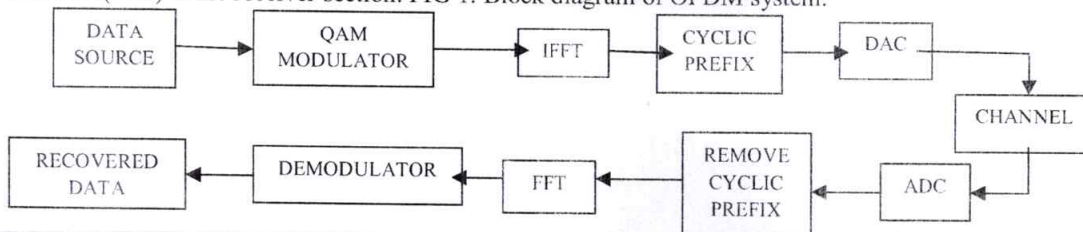
I. INTRODUCTION

The multiplexing technique which offers high resistance to the fading channel environment and has high data transmission capability and high bandwidth efficiency is the OFDM technique. By using the principle of orthogonality the use of bandwidth can be reduced and the inter carrier interference (ICI) between the subcarriers is reduced. In an OFDM system, FFT and IFFT are used to generate the signal. In the concept of OFDM system, the total bandwidth available is divided in to N symbols and are modulated and sent over N subcarrier channels which are orthogonal. These carriers may undergo inter symbol interference (ISI) and degrades the OFDM system performance. The means of dealing the ISI effect is to add the guard interval between the consecutive OFDM symbols. The methods of adding the guard interval is discussed in the later sections.

In wireless channels the phenomenon called 'fading' which is the variation of signal amplitude over frequency and time. The common source of signal degradation is fading which is characterized as a disturbance which is non-additive in the wireless channel. Fading can also be due to multipath propagation. The radio wave signal propagated from the transmitter reaches the receiver passing through various obstacles resulting in a faded signal. This paper is organized as: section II describes the OFDM system. In section III bit error rate (BER) is explained. Section IV deals with the modulation techniques used. Section V explains about fading and multipath. In section VI Doppler shift effects are explained. Section VII consists of the simulation results followed by section VIII consisting of conclusion to summarize this paper.

II. OFDM SYSTEM USING FFT

In the concept of OFDM the data to be transmitted is spreaded over a large number of carriers which are further modulated. By choosing the frequency spacing between them the orthogonality between the carriers is achieved. When compared to the Frequency Division Multiplexing the overlapping of the carriers in OFDM is allowed as the property of orthogonality ensures the separation of the subcarriers at the receiver with a better spectral efficiency and also avoids the use of a band pass filter. The symbols transmitted in the OFDM system are a set of complex numbers. As these complex numbers which are in frequency domain should be converted in to time domain. This conversion is achieved by Inverse Fast Fourier Transform (IFFT) at transmitter section and Fast Fourier Transform (FFT) at the receiver section. FIG 1: Block diagram of OFDM system.



JOURNAL OF VLSI DESIGN TOOLS & TECHNOLOGY

- HOME ABOUT LOGIN REGISTER SEARCH CURRENT
- ARCHIVES ANNOUNCEMENTS AUTHOR GUIDELINES REFERENCING
- PATTERN SAMPLE RESEARCH PAPER SAMPLE REVIEW PAPER
- PUBLICATION MANAGEMENT TEAM STM HOME PAGE NEW SUBMISSION

Home > Vol 6, No 3 (2016) > Venkatrao

Open Access Subscription or Fee Access

DESIGN OF HIGH-SPEED AND LOW-POWER CARRY SKIP ADDER

Gutlapalli Venkatrao, Motkuri Krishna

ABSTRACT

In this brief, we present a high speed and lower power consumption carry skip adder (CSKA) architecture compared with the conventional one. The increment of speed is attained by implementing concatenation and incrementation strategy to improve the efficiency of the conventional CSKA (Conv-CSKA) architecture. Instead of make use of multiplexer logic, the proposed architecture makes use of AND-OR-Invert (AOI) and OR-AND-Invert (OAI) combination gates for the carry skip logic. The structure possibly designed with both fixed stage size and variable stage size styles, wherein the latter further improves the speed and power parameters of the adder. This expansion utilizes a modified parallel structure for increasing the slack time, and enabling further voltage reduction. The proposed architectures are evaluated by comparing their speed, power, and area with those of other adders using 90-nm and 45-nm static CMOS technology.

Keywords: Carry skip adder (CSKA), high performance, incrementation, concatenation

Cite this Article

Venkatrao and Krishna. Design of High-Speed and Low-Power Carry Skip Adder. *Journal of VLSI Design Tools and Technology*. 2016; 6(3): 35-44p.

FULL TEXT:

PDF 

REFBACKS

- There are currently no refbacks.

OPEN JOURNAL SYSTEMS

Journal Help

SUBSCRIPTION

Login to verify subscription

USER

Username

Password

Remember me

FONT SIZE

NOTIFICATIONS

View
Subscribe

LANGUAGE

Select Language

English

JOURNAL CONTENT

Search

Search Scope

All

Browse

- By Issue
- By Author
- By Title
- Other Journals

INFORMATION

For Readers

For Authors

For Librarians

KEYWORDS

45nm Technology ADC Carry Select Adder (CSLA)


PRINCIPAL
 Geethanjali College of Engg. Tech.
 Choeryal (V), Keesara (M), P.R. Dist. (A.P.) - 501 301.

33

16-17

Efficient VLSI Architectures for FIR Filters

O. Venkata Krishna¹, Dr. C.Venkata Narasimhulu², Dr. K. Satya Prasad³

¹(ECE, CVR College of Engineering, Hyderabad, India)

²(ECE, Geethanjali College of Engineering and Technology, Hyderabad, India)

³(ECE, University College of Engineering - JNTUK, Kakinada, India)

Abstract: The Finite Impulse Response (FIR) filters are widely used in many Digital Signal Processing (DSP) applications. For these applications, the low power, less area, high speed and low complexity FIR filter architectures are required. The researchers have proposed many FIR filters to meet the above design specifications. This paper is focused on the some efficient reconfigurable FIR filter architectures. The author Mohanthy et. al introduced a FIR filter architecture implemented for higher order fixed and reconfigurable applications. This filter is a block FIR filter, which realized in transpose-form configuration with less area, low power and less delay for large order filters. The second filter architecture in this paper is a custom reconfigurable power efficient FIR filter using multiplier less (Reduced Adder Graph) RAG-N Algorithm. In this method, the multiplier is realized using adders and shifters. This architecture is easy to implement, symmetrical and stable system. The next approach in this paper is implementation energy efficient FIR filter using alternative adders. In this, the filters are optimized for low power using multiplier less Multiple Constant Multiplication (MCM) algorithm. The alternative adder circuits are truncated and approximated to reduce the power consumption. Another efficient programmable FIR filter is implemented using Karatsuba Multiplication Algorithm. In this architecture, a parallel, modified booth pre-encoded, carry save Wallace tree multiplier is used for the multiplication of large numbers. This architecture is more efficient in terms of power, area and speed comparatively than other FIR filters. Finally, the comparison is taken place among the four efficient Very Large Scale Integration (VLSI) FIR filter architectures in terms of power, area and speed.

Keywords: FIR, Low power, Booth encoder, Wallace tree multiplier, VLSI, MCM and RAG-N.

I. Introduction

Finite-Impulse Response filters are important building blocks in many DSP systems such as portable wireless systems, mobile phones and battery operated multimedia devices. The design metrics power, area and speed are considered as important parameters for VLSI architectures. The design methodology for high speed, low power and low area is essential in the implementation of all DSP (Integrated Circuit) ICs. The minimization of power dissipation and area depends on the selection of appropriate algorithms and mapping on to suitable architecture. A great extent of power can be reduced by the elimination of redundant and irrelevant computations in the particular system. Based on the above aspects, this paper reviewed different high performance VLSI FIR architectures for DSP applications. These architectures are implemented to reduce power dissipation, increasing the speed of operation and minimizing the area of the chip.

The total power consumption of Complementary Metal Oxide Semiconductor (CMOS) circuit is a combination of static power and dynamic power. Static power is defined as the power consumed when the input signal is a constant value. The dynamic power consumption is the power consumed when the transistors are active and the input signal change the state of the transistors frequently. In the existing methods of FIR filters, lot of power is consumed because of the switching activities in the circuit. The dynamic power can be reduced by proper identification and suppressing the unnecessary activities in the circuit. The speed of the any architecture depends on the longest path delay of the combinational circuit, setup time of the sequential circuits and clock skew. The power reduction and speed enhancement are open problems in the VLSI design. The previous works presented reconfigurable FIR filter architectures which were independent of the number of taps and non-zero digits in each tap were arbitrarily assigned [1]. The intention of the authors was to reduce the precision of coefficients and thus the filter complexity without affecting the filter performance. But some of the architectures demanded huge hardware resources and this makes the method infeasible for power constrained receiver applications. High speed programmable based reconfigurable FIR filter was proposed by different authors. This paper presents some efficient VLSI architectures for the solution of the above problems.

II. Block FIR Filter in Transpose Form Configuration

In this section, the block FIR filter architecture is presented using MCM scheme, which is suitable for fixed filters as well as for reconfigurable filters. The realization of block FIR filter in the transpose configuration, which includes the MCM scheme and inherent pipelining. This realization gives low complexity and area-delay efficient architecture for large order FIR filters. This efficient FIR filter architecture is suitable

Swe
PRINCIPAL
Geethanjali College of Engg. Tech.
Cheruvu (N), Keesara (M), P.R. Dist. (A.P.) - 501 301

Electronic Model of Human Brain using Verilog

M.Krishna¹ M. umarani²

1 & 2: Assistant Professor ,Department of ECE,Geethanjali College of Engineering and Technology

Abstract:

Reversible logic has become an emerging field for research. The main advantage of reversible logic is power reduction and this advantage have drawn up a significant interest in this field. The aim of the paper is to realize the decoder using Fredkin gate which is basically a reversible gate. There are many reversible logic gates i.e Fredkin gate, Feynman gate, Double Feynman gate, Peres gate, New gate, Toffoli gate and many more. In the reversible logic, reversibility have a special condition which is reversible computing and it is based on the principle of bijection device with a same no of inputs and outputs which means one to one mapping. It finds its application in various fields including quantum computing, optical computing, nanotechnology, computer graphic, cryptography, digital signal processing and many more. Reversible logic is gaining importance in recent years largely due to its property of low power consumption. A comparative study in terms of the number of gates, number of constant inputs, number of garbage outputs and quantum costs is also presented. The circuit has been implemented and simulated in Xilinx.

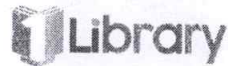
Introduction

Two hardware description languages—Verilog and VHDL—have become established as the industry-standard starting point for large-scale digital logic synthesis [1]. But why two languages? Wouldn't one be enough? And most critically: How does the need to support more than one language affect your design flow? The answer to this riddle is critically important to every design engineer, verification engineer, and engineering manager. Come with us as we search to find the answer! Along the way we will explore the history of HDLs, examine the intricacies of your current design flows, and discuss our recommendations for the future.

In 1977, G. J. Lipovski gave this simple definition: "...a hardware description language is a variation of a programming language tuned to the overall needs of describing hardware [2]." In 1979, W. M. vanCleemput [3] listed the major applications of HDLs as:

- Description of the behavior and/or structure of a system as a means for accurately communicating design details between designers and end users.
- As the input to a system level simulator.
- As the input to an automatic hardware compiler.
- As the input to a formal verification system. Amazingly, decades later these comments still hold true

In his 1940 master's thesis, Claude Shannon introduced a method for describing circuit behavior using Boolean algebra, manipulating these equations into their simplest form, and then synthesizing the corresponding relay switching circuits [4]. In a 1946 report, John von Neumann used a symbolic notation to describe the operations (i.e., instruction set) of the IAS computer [5]. Irving S. Reed in 1952 proved that Boolean algebraic equations can be physically realized as electronic circuits, and recommended "...in the initial synthesis [design] of a digital computer it is desirable to concentrate one's attention on the abstract model of the digital computer [6]." By 1956, Reed extended this work into what he called



16-17



Home > Other

Performance Analysis and Comparison of Zero Forcing and MMSE Precoding and Detectors for 5G MIMO

6 7 Download (1)

1 / 6



ISSN(Online): 2320-9801
ISSN (Print): 2320-9798

International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirccce.com

Vol. 5, Issue 3, March 2017

Performance Analysis and Comparison of Zero Forcing and MMSE Precoding and Detectors for 5G MIMO

Naga Lakshmi Yarlagadda

Assistant professor, Dept. of ECE, Geethanjali College of Engineering and Technology, Hyderabad, Telangana, India

ABSTRACT: Wireless transmission is affected by fading and interference effects which can be combated with equalizer. Non-linear precoding for the downlink of a multiuser MISO (multiple-input single-output) communication system in the presence of imperfect channel state information (CSI) is considered. The use of MIMO system promises good improvement in terms of spectral efficiency, link reliability and Signal to Noise Ratio (SNR). The Bit Error Rate (BER) characteristics for the various transmitting and receiving antenna are simulated in Matlab tool box and many advantages and disadvantages of the system is described. The simulation results show that the equalizer based zero forcing receivers is good for noise free channel and is successful in removing ISI, but MMSE is a better choice than ZF in terms of BER characteristics and under Noise performance.

KEYWORDS: MIMO, Zero forcing Equalizer, ISI, BER, linear equalization, MMSE

I. INTRODUCTION

As of now future wireless networks will should address a sizable increase of data transmission due to some of rising applications that include gadget-to-machine communications and video streaming [1]- [4]. This very big amount of statistics alternate is anticipated to hold and upward thrust inside the subsequent decoder so, presenting a totally huge challenge to designers of fifth-generation (5G) wireless communications systems [4]. Amongst the main problems are how to make the fine use of the available spectrum and a way to growth the power performance in the transmission and reception of each information unit. 5G communications will should rely on technologies that can provide a chief growth in transmission capacity as measured in bits/Hz/location but do now not require increased spectrum bandwidth or strength intake. Multiple-antenna or multi-user multi-output (MIMO) wireless communication devices that employ antenna arrays with a very massive variety of antenna elements that are called enormous MIMO systems have the ability to conquer the ones challenges and deliver the specified statistics rates, representing a key allowing era for 5G [5]- [8]. Among the devices of big MIMO networks are person terminals, medicines, technologies and base stations which can be equipped with a range of antenna elements with orders of value higher than modern devices. Massive MIMO networks could be structured by way of the subsequent key elements: antennas, network architectures, protocols and signal processing. The idea behind massive MU-MIMO is to equip the base-station (BS) with hundreds of antennas while serving tens of users in the same time-frequency resource. This approach enables extremely fine-grained beamforming in the uplink (users transmit to the BS) and in the downlink (BS transmits to the users), and hence

DOWNLOAD (PDF - 6 Page - 713.81KB)


PRINCIPAL
Geethanjali College of Engg. Tech.
Cheerayal (V), Keesara (M), R.R. Dist. (A.P.) - 501 307

Bank Security System using GSM Technology with Arm 7 Processor

Hari Kumar. B¹, Haritha Reddy. C², Sharath Kumar. B³, Sajahan. D⁴, Sai Chandu. G⁵

^{1,2,3,4,5}Department of ECE, JNTUA

Brindavan Institute of Technology and Science

Abstract: In this paper an advanced design system has been proposed to control the electrical devices in industries, homes and banks by using GSM technology. A GSM modem provides the communication interface. It transmits the protocols of the system through wireless network. The GSM Modem can accept any GSM network operator SIM card and act just like a mobile phone with its own unique phone number. Advantage of using this modem is that its RS232 port can be used to communicate and develop embedded applications. Applications like SMS Control and logging can be developed easily. This modem can be connected either to PC serial port directly or to any microcontroller. This paper gives the best solution for avoiding wastage of electrical power. Also the manual operation is completely eliminated. This project is implemented on wireless technology using GSM as it is very cheap and very easy to implement. This paper is designed to provide security for banks. In this a PIR sensor is used for identifying thieves at night time. An SMS will be sent if anyone breaks the door. If smoke is more, then the same is intimated through SMS. Keypad is used to access the door. For three wrong entries of password a buzzer will be triggered and an SMS will be sent. This project uses regulated 5V, 500mA power supply. 12V dc is used for relay, 7805IC is three terminal voltage regulator which is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

I. INTRODUCTION

Security is alarming nowadays. Every individual will be interested to safeguard his belongings and properties. The theft chances are increasing with the advancement in technology. Theft attempt may warn the nearby security people by triggering the buzzer automatically and also by sending the message through GSM module quickly to the concerned persons to make them alert with the support of GSM technology. This automation in the security monitoring system using electronics assembly which are connected, is to develop a mechanism to identify the theft chances at any desired points. This system uses GSM Technology which sends the information to the desired manager or security staff about any unauthorized entry to the bank during night times.

II. EXISTING SYSTEM

Bengali and Shaligram (2013) proposed a traditional banking security system which gives the signal in the form of alarm. However, the GSM based security systems provides enhanced security as whenever a sensor detects the signals a message is sent to the defined mobile number. Nandeesh *et al.* (2014) projected a mechanism that protects people from leaking of raw gas and fire at home and industries. Agarwal and Nayak (2012) proposed construction of a banking security system which has that password protected door lock with an LED based resistive screen input panel which is set to detect any obstacle while monitoring the windows and doors at night using IR sensors. Fire alarm system uses smoke sensor which senses sudden considerable change in density of surrounding air and raises alarm. Lee *et al.* (2013) described a multilevel home security system which consists of different sensors nodes, priority interrupt controller (PIC) and universal asynchronous

Proposed system

This project is aimed to design a system to control the electrical devices in banks, industries and homes by using GSM technology. Which is a combination of all the sensors and GSM module for interacting with user automatically for any theft and risk management.

A GSM modem provides the communication interface. It transports device protocols transparently over the network through a serial interface. A GSM module is a wireless circuit which works without any medium. This GSM Modem can accept any GSM network operator SIM card and act just like a mobile phone with its own single phone number. Applications like SMS Control, data transfer.



ISSN (Print) : 2320 – 3765
ISSN (Online): 2278 – 8875

International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Special Issue 8, November 2016

Power Quality Improvement of Unbalanced Distribution System using ANN-LMBNN based D-STATCOM

M.Pradeep¹, V.Padmaja²

Assistant Professor, Geethanjali College of Engineering and Technology, Cheeryal (V), Keesara (M), R.R.Dist,
Telangana, India^{1,2}

ABSTRACT: In power distribution system most of the loads are nonlinear loads, these nonlinear loads causes voltage unbalancing in distribution system lead to major power quality problems in distribution system such as voltage swell, sag and THD, to mitigate these power quality problems a Liebenberg-Marquardt Back propagation(ANN-LMBNN) based D-STATCOM is proposed. The performance of proposed an ANN based D-STATCOM is tested on 13-bus IEEE test feeder, a D-STATCOM is placed at bus no-632.The performance of proposed ANN based D-STATCOM is compared to D- STATCOM with PI control mechanism using MATLAB-simulink .

KEYWORDS: Power Quality (PQ), D-STATCOM, ANN, MATLAB/SIMULINK

I. INTRODUCTION

Now a day's power quality is a more serious problem for consumers and power companies. The detection of power quality problem in power distribution system is more difficult. At consumer premises need to maintain ideal voltage and frequency but supply voltage we are receiving is deviating from normal voltage. In addition to this power quality problems affects more seriously to the end user. There are different types of power quality problems such as impulsive transients, oscillatory transients. Impulsive transients occurs for small duration of time. oscillatory transients occurs for long duration of time, which can damage power line insulators in distribution and transmission systems. Impulsive transients are suppressed by surge arrester. Apart from this there are different types of power quality problems .Short duration power quality problem like voltage sag and voltage swell, which lead to change in magnitude of voltage for small duration of time. Voltage sag causes loss of production in bulk industries; the voltage sag can trip motor and malfunction of its controller. The voltage swell caused more electrical stress on electrical home appliances. Voltage flickers at consumer premises are another power quality problem due to are lamps and arc furnaces. It is well understood that if we are not maintain certain power quality standards at consumer point of view there will be more loss of production, damage of equipment, to mitigate these power quality issues in distribution system the custom power devices are introduced. These custom power devices such as DVR, D-STATCOM effectively improves power quality at consumer side. The distribution system suffers from serious power quality disturbances due to nonlinear loads, which drawing harmonic currents from supply mains.

D-STATCOM is a suitable custom power device to address the power quality issues of an unbalanced distribution system and efficient device to resolve power quality issues, D-STATCOM consisting of a Voltage Source Converter (VSC) and a shunted DC link capacitor [9-10]. A D-STATCOM is reactive source, generating and absorbing reactive power. In this paper a 13-bus unbalanced distribution system is considered to address power quality problem and a D-STATCOM is connected at bus number 632.

DESIRABILITY THROUGH EFFECTIVE MANAGEMENT OF MATERIALS

D.SAMUEL JOHN Professor, Dept of Mechanical Engineering, Geethanjali college of Engineering & Technology, Cheeryal (Vill) Keesara(M) Hyderabad.

Dr.B.C.Lakshmana Asst. Professor, Dept of Management, J..N.T.U. Anantapur

B.SubbaRao Associate Professor, Dept of Mechanical Engineering, Geethanjali College of Engineering & Technology, Cheeryal (Vill), Keesara (M), Hyderabad.

ABSTRACT

This paper is focusing one of the problems of a Manufacturing Company in which the growing trend towards the higher cost of materials and services and constant shut down of factory, which erode business profit. The paper focuses on how business firm can attain desirability through effective management of materials. The objective of this paper is to identify problems of material management, which if corrected can result in Desirability. The paper also examines and outlines the roles and benefits of materials management. Secondary data and primary data were utilized in this study. The finding shows that there is need to recognize the materials management function and in this paper, it has been suggested that for a firm to achieve profitability, the goal of materials management outlined should be properly carried out.

Key words: Management, production, profit, materials, prudent.

INTRODUCTION

Profit is the entrepreneur's reward and in fact, a major motive for doing business. Most often too, it is used as an index for measuring performance. This paper is undertaken to outline how desirability can be achieved through effective management of raw materials. It focuses on cost reductions, adequate supply of materials and proper storage.

Materials management is that aspect of business activity that deals with planning for purchasing, receiving, handling, storing, and releasing of materials for use in production with effective control measures. Materials are industrial goods that will become part of another physical product. Rumelt (1981) has classified materials for use in manufacture under three headings:

- Raw materials primarily from agriculture and the various extractive industries e.g. mineral resources, fruits, and vegetables sold to processor.

- Semi-finished goods and processed materials to which some work has been applied or value added e.g. rods, wires, paper, chemicals, etc.
- Component parts and assemblies that are completely finished products of one manufacture, which can be used as part of more complex product by another manufactures.

Consequently, it is the managing of these materials that we refer to as materials management. Thus, materials. Management has been defined by Lee and Dobler (1997: 47) as the total of all those tasks, functions and routines which are concerned with the transfer of external materials and services into the organization and the administration of same until they are consumed or used up in the process of production, operation or sales. Materials management includes all the activities

16-12-19

Experimental Analysis of Hydrogen Fuel Based IC Engine

M. RAVINDRA GANDHI¹, K. RAJU², RAJASEKHAR V³

¹Assistant Professor, Dept of Mechanical Engineering, Geethanjali College of Engineering & Technology, Hyderabad, TS, India,
Email: mails4gandhi@gmail.com.

²Assistant Professor, Dept of Mechanical Engineering, Geethanjali College of Engineering & Technology, Hyderabad, TS, India,
Email: kunchala324@gmail.com.

³Assistant Professor, Dept of Mechanical Engineering, Geethanjali College of Engineering & Technology, Hyderabad, TS, India,
Email: raajsv_0333@yahoo.com.

Abstract: In the history of internal combustion engine development, hydrogen has been considered at several phases as a substitute to hydrocarbon-based fuels. Starting from the 70's, there have been several attempts to convert engines for hydrogen operation. Together with the development in gas injector technology, it has become possible to control precisely the injection of hydrogen for safe operation. Since the fuel cell needs certain improvements before it is widely used in vehicles, the conventional internal combustion engine is to play an important role in the transition. This study examines the performance characteristics and emissions of a hydrogen fueled conventional spark ignition engine. Slight modifications are made for hydrogen feeding which do not change the basic characteristics of the original engine. Comparison is made between the gasoline and hydrogen operation and engine performance parameters are discussed.

Keywords: Combustion, Gas Injector, Gasoline, Characteristics.

I. HYDROGEN USE IN SPARK IGNITION (SI) ENGINES

Hydrogen can be used as a fuel directly in an internal combustion engine, almost similar to a spark-ignited (SI) gasoline engine.. Most of the past research on H₂ as a fuel focused on its application in SI engines. Hydrogen is an excellent candidate for use in SI engines as a fuel having some unique and highly desirable properties, such as low ignition energy, and very fast flame propagation speed, wide operational range. The hydrogen fuel when mixed with air produces a combustible mixture which can be burned in a conventional spark ignition engine at an equivalence ratio below the lean flammability limit of a gasoline/air mixture.

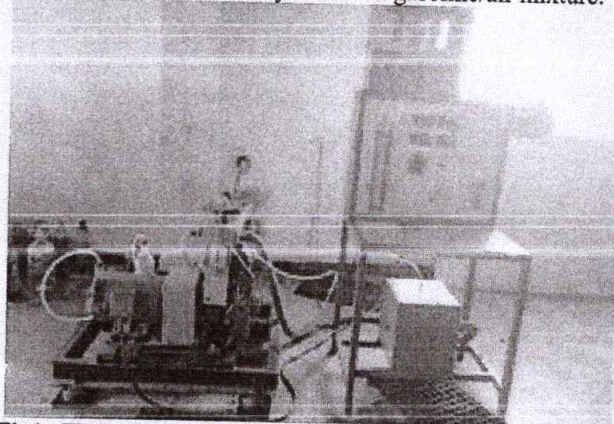


Fig1. Hydrogen Setup Connected To The Four Stroke Petrol Engine.

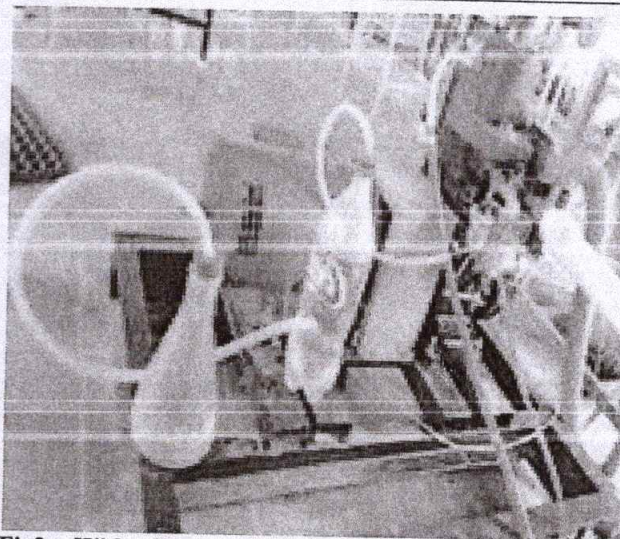


Fig2. With Single Cylinder Engine Working with Hydrogen Gas.

Table1. Petrol Readings

S.No	Watts	Volts	Amps	RPM	Temperature in °C	Pipette Reading in ml	Time Taken For Pipette Reading(sec)	Specific Fuel Consumption In Kg/Kw-Hr	Efficiency %
1	500	229	2.72	3106	21.6	10	27	1.95	3.82
2	1000	214	5.15	3050	36.2	10	22	1.20	6.21
3	1500	202	6.25	2990	40.2	10	20	0.88	8.48
4	2000	196	6.50	2969	35.8	10	21	0.63	11.87

Evaluation of Mechanical Properties of Carbon Woven Fabric Reinforced Epoxy based Composite

K. RAJU¹, M. RAVINDRA GANDHI², R. RAJA SEKAR³

¹Assistant Professor, Dept of Mechanical Engineering, Geethanjali College of Engineering & Technology, Hyderabad, TS, India, E-mail: kunchala324@gmail.com.

²Assistant Professor, Dept of Mechanical Engineering, Geethanjali College of Engineering & Technology, Hyderabad, TS, India, E-mail: mails4gandhi@gmail.com.

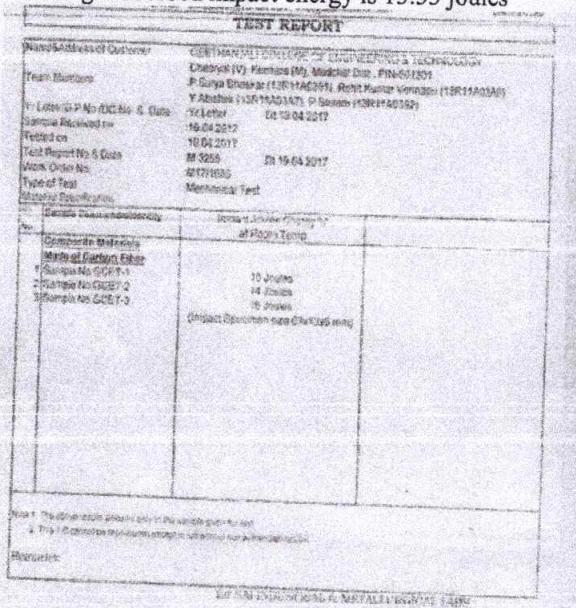
³Assistant Professor, Dept of Mechanical Engineering, Geethanjali College of Engineering & Technology, Hyderabad, TS, India, E-mail: rajasekhar4v@gmail.com.

Abstract: The shortage of fossil fuel supply and the new imperative of environmental sustainability to combat global warming have exerted tremendous pressure on transforming the current materials design and manufacturing technologies for human transportation (air, land and sea). Light weight is rapidly becoming a necessity for structures, as a result of its less energy consumption from the vehicles which take into account of this critical issue. Carbon woven fabric reinforced epoxy based composite were fabricated using "Hand Lay Up" technique and the mechanical properties, such as flexural strength And Impact strength were evaluated. Carbon Based composite showed excellent mechanical properties compared to E-glass-based composites. Our procedure includes preparing the carbon laminates of required dimensions and these are coated completely with epoxy resin and they are laid one upon the other till required thickness is obtained. Now this composite is set to harden and cut to required dimensions for testing. Both impact and flexural tests are done on the specimens.

Keywords: Human Transportation, E-Glass, Epoxy Resin.

I. IMPACT TEST

The absorbed impact energy for specimen 1 is 10 joules
The absorbed impact energy for specimen 2 is 14 joules
The absorbed impact energy for specimen 3 is 16 joules
The average absorbed impact energy is 13.33 joules



TEST REPORT

Name/Address of Customer: GEETHANJALI COLLEGE OF ENGINEERING & TECHNOLOGY, Cheerla (V), Keesara (M), Medchal Dist., PIN-501301
Team Member: P. Surya Sekhar (13R11A0204), Rishi Kumar Venkata (13R11A0345), Y. Abhishek (13R11A0347), P. Sathish (13R11A0352)

Work Order No: 24121803
Date: 18-04-2017
Type of Test: Mechanical Test

No.	Specimen Material	Mass of Carbon Fiber	Impact Strength (Joules)
1	Sample No: GCE1-1	10 Joules	
2	Sample No: GCE1-2	14 Joules	
3	Sample No: GCE1-3	16 Joules	

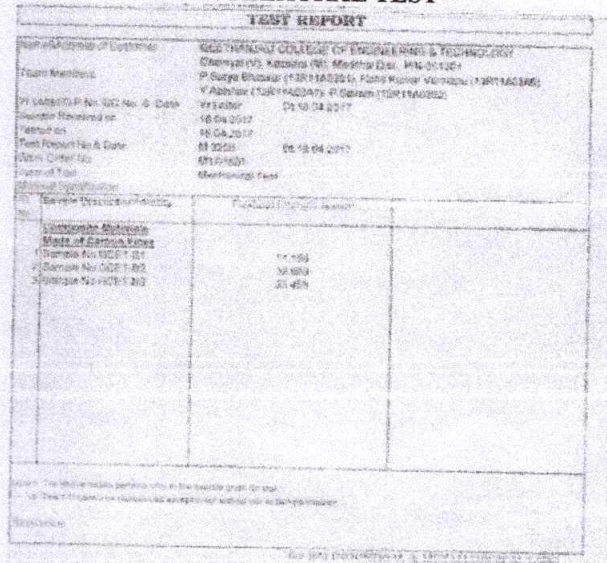
Average Impact Strength: 13.33 Joules

Fig.1. Impact test report.

TABLE I:

S.No	Impact Strength(J)
Specimen 1	10
Specimen 1	14
Specimen 1	16

II. FLEXURAL TEST



TEST REPORT

Name/Address of Customer: GEETHANJALI COLLEGE OF ENGINEERING & TECHNOLOGY, Cheerla (V), Keesara (M), Medchal Dist., PIN-501301
Team Member: P. Surya Sekhar (13R11A0204), Rishi Kumar Venkata (13R11A0345), Y. Abhishek (13R11A0347), P. Sathish (13R11A0352)

Work Order No: 24121803
Date: 18-04-2017
Type of Test: Mechanical Test

No.	Specimen Material	Mass of Carbon Fiber	Flexural Strength (N/mm ²)
1	Sample No: GCE1-1	11.45g	
2	Sample No: GCE1-2	12.88g	
3	Sample No: GCE1-3	13.45g	

Fig.2. flexural test report.

16-17 A

Design and Experimental Analysis on Gas Turbine Model (Waste Heat Recovery System)

Peram Laxmireddy¹, A. Akhil Reddy², Kola. Praveen³

¹Assistant Professor, Dept. Of Mechanical Engg, Geethanjali college Of Engg. & Technology.

²Assistant Professor, Dept. Of Mechanical Engg, Siddhartha Institute of Technology and Sciences.

³M.TECH Student, Dept. Of Mechanical Engg, Siddhartha Institute of Technology and Sciences, Telangana, India.

Abstract - The main objective of this project work i.e., design and test the WHR model is to reduce global warming, to convert waste heat to useful work or electricity with low cost. Industrial processes, such as oil refining, steel making, glass making, HCL producing plants and cement factories, big diesel generator sets are major sources of waste heat. Waste heat is recovered and converted in to steam and the steam so produced is allowed to expand in steam turbines to turn turbine and generator rotor which produces electrical energy in larger size of plants. But in smaller industries and plants this waste heat is left in to atmosphere since even if this heat is recovered, cannot produce work / electrical energy due to lack low temperature equipments available in market. This leads to increased global temperatures and demand / scares of fuels.

Turbine is a rotary mechanical device that extracts energy from a fluid flow and converting it into useful work. It is a turbo machine with at least one moving part called a rotor assembly, which is a shaft with blades attached. Moving fluid acting on the blades so that they move and impart rotational energy to the rotor. Gas, steam, and water turbines have a casing around the blades that contains and controls the working fluid. Most of the Gas and steam turbines used to produce power operates at very high temperatures, corrosive environment and built to handle very high volumes of gas or steam hence needs special materials and coating to protect the turbine rotor as well as casing, leading very high manufacturing cost ranging from millions to billions of dollars.

Low temperature waste heat produced in several processes and industries can be recovered and used for producing mechanical work (either to drive some machine or producing electricity) if we can develop turbines which can be operated in low temperature gases / air and easy to manufacture designs / low cost.

Key Words: Waste Heat Recovery System, Gas Turbine Model, coal.

1. INTRODUCTION

1.1 Classification of turbines

Turbines are basically classified based on two criteria. They are

- i) Working fluid ii) Working action of fluid

Working: Steam turbine convert a part of the energy of the steam evidenced by high temperature and pressure into mechanical power-in turn electrical power. The steam from the boiler is expanded in a nozzle, resulting in the release of a high velocity jet. This jet of steam impinges on the moving vanes or blades, placed on a rotor. The steam is condensed in a condenser.

Due to the striking of the steam with the blades they will be in motion and due to this the rotor disc which is keyed to a shaft and finally the shaft rotates. This rotary power of shaft is used in many applications.

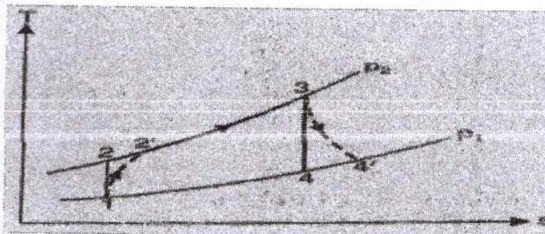
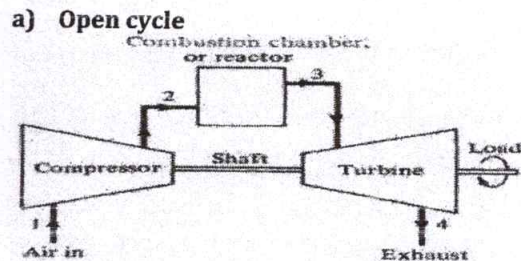
The efficiency of a Rankine cycle can be increased by employing regenerating method or reheating method

1.2 Gas Turbine

A gas turbine is a turbine that uses gas (e.g. air, nitrogen, helium, argon, etc.) as working fluid. It works on the principle of Brayton cycle.

Basically gas turbines are of two types

- 1) Constant pressure combustion gas turbine
 - a) Open cycle
 - b) Closed cycle
- 2) Constant volume combustion gas turbine
 - 1) Constant pressure combustion gas turbine



18-10-12

An Enhanced Fall Detection System for Elderly Person Monitoring using Consumer Home Networks

LakshmiPriyankaDevi.M¹, T. Ravi kumar², Girish Kumar PVR³

¹PG Scholar, Dr.K.V.Subba Reddy College of Engineering for Women's, Kurnool, Andhra Pradesh, India

²Assistant Professor, Dr.K.V.Subba Reddy College of Engineering for Women's, Kurnool, A.P, India.

³Assistant Professor, Geethanjali College of Engineering & Technology, R.R.Dist, Telangana, India.

Abstract: - This project describes Various fall-detection solutions have been previously proposed to create a reliable surveillance system for elderly people with high requirements on accuracy, sensitivity and specificity. In this project, an enhanced fall detection system is proposed for elderly person monitoring that is based on smart sensors worn on the body and operating through consumer home networks the design of a simple, low-cost controller based wireless fetal heart beat monitoring system. Heart rate of the subject is measured from the thumb finger using IRD (Infra Red Device sensors and the rate is then averaged and displayed on a text based LCD).The device LCD displaying the heart beat rat and counting values through sending pulses from the sensor. This instrument employs a simple Opto electronic sensor, conveniently strapped on the finger, to give continuous indication of the pulse digits. The Pulse monitor works both on battery or mains supply. It is ideal for continuous monitoring in operation theatres, I.C.units, biomedical/human engineering studies and sports medicine.

LCD).The device LCD displaying the heart beat rat and counting values through sending pulses from the sensor.

This instrument employs a simple Opto electronic sensor, conveniently strapped on the finger, to give continuous indication of the pulse digits. The Pulse monitor works both on battery or mains supply. It is ideal for continuous monitoring in operation theatres, I.C.units, biomedical/human engineering studies and sports medicine.

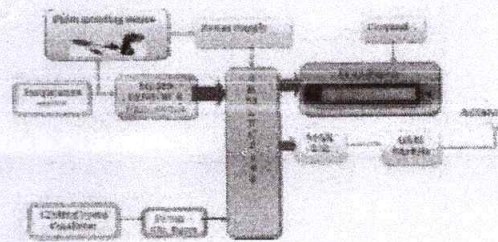


Fig 1 (a)

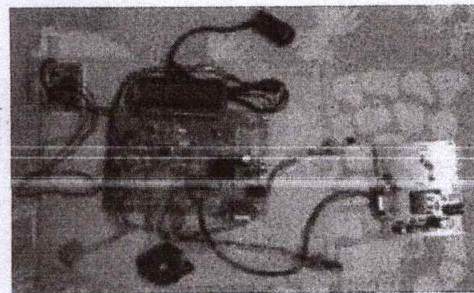


Fig 1 (b)

Figure 1 (a) & (b) Block diagram of fall detection system & Circuit Board

Keywords: - Arm 7 (Lpc2148), Mems Sensor, Panic Switch, Temp Sensor, Heart Beat Sensor, GSM

I. INTRODUCTION

In this method we are using total three sensors one is MEMS sensor and other heart beat sensor, temperature sensor. Whenever the elderly person is going to fall immediately the MEMS sensor will be activated and the message transmitted to the authorized person. Even though if the person requires anything immediately the person will press the panic switch and the message will be transmitted with the help of GSM modem.

This project describes the design of a simple, low-cost controller based wireless fetal heart beat monitoring system. Heart rate of the subject is measured from the thumb finger using IRD (Infra Red Device sensors and the rate is then averaged and displayed on a text based

POWER SUPPLY

This project uses regulated 5V,9V 500mA power supply.7805 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac out put of secondary of 230/18V step down transformer

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheerla (V), Keosara (M), R.R. Dist. (A.P.) - 501 301

Experimental Analysis of Working Characteristics of Cornoil As An Alternate Fuel of Diesel Engine

Dr. A. Nagaraju¹

Lecturer,

Department of Mechanical Engineering,
JNTUA College of Engineering, JNTUA,
Ananthapuramu, A.P, India.

U. Sreekanth¹

Asst.prof,

Department of Mechanical Engineering,
Geethanjali College of Engineering & Tech,
Hyderabad. Telangana, India.

Abstract:: In many applications like Transportation, Power generation, Marine applications etc., diesel Engines are being used as a major source. During last century, the use of fossil resources is increasing due to significant growth of population and change in life style. This causes crises of fossil fuel depletion. For the diesel engines there is an urgent need for suitable alternative fuels. In this paper will be examined the use of diesel-corn oil mixtures in diesel four stroke engine.. With diesel and different blends of corn oil, an attempt is made to analyze the performance and emission characteristics of a diesel engine. Based on experimental analysis of the engine brake power specific fuel consumption thermal efficiencies are calculated. Emissions such as carbon monoxide, carbon dioxide are measured.

Keywords: Alternative fuels, Emissions, Diesel engines, fossil fuel, corn oil.

I. INTRODUCTION

As fossil fuels are limited sources of energy, this increasing demand for energy has led to a search for alternative sources of energy that would be economically efficient, socially equitable and environmentally sound. Biofuels are considered as alternative sources of energy. Speaking in terms of advantages, much heard is they, as an alternative fuel, could solve served is used as the increasing energy prices world wide. By using renewable resources like Vegetable oils [1], Animal fats tallow's etc., biodiesel can be produced. Low content of sulfur, aromatic content and having high cetane number and lubrication properties are seen in biodiesel by many investigations [2]. With the help of biodiesel blends with diesel fuel many investigations are carried out and results showed that there is less in emissions like CO,HC,SO₂ [3].

In this paper, would like to highlight upon the usage of different blends (10%, 20%, 30%, 40%)of corn oil for a compression ignition engine and studied the performance and Emission characteristics of this fuel at different loads. A single cylinder CI engine (Kirloskar, 4stroke water cooled with 5HP,1500rpm) coupled with eddy current dynamo meter loading is used for experimental investigation and following results have been recorded.

II. LITERATURE SURVEY

S. Bari (4)., makes a point that viscosity of Crude Palm Oil (CPO) is too high to allow smooth flow in fuel lines and thus needs to be heated to reduce viscosity. However, this heating of CPO offered no advantages in term of performance. In the performance test, it was found that the performance of CPO, as a fuel, was comparable with that of Diesel. Carbon monoxide emissions for CPO. Compared to Diesel, were higher.

Y. He (5)., has done his investigation on cottonseed oil. This oil is promising as an alternate fuel source of Diesel engine because of its high gross heat content. Optimal combinations of four working parameters under two operating conditions were determined when the mixture of 30% cottonseed oil and 70% Diesel oil were used. The main factor influencing the SFC or thermal efficiency was found to be the fuel delivery angle and its optimum values for two operating conditions was about 22CA that is 3CA to 5CA in advance of that which was appropriate for the engine fuelled by pure Diesel oil.

Murat karabektas et al.,(6) In this study " cottonseed oil methyl ester(COME) is use as fuel in Diesel engine to evaluate the performance and emission parameters. For this purpose single cylinder. four-stroke, direct injection Diesel engine is taken. Before supplied to the engine, COME was preheated to four different temperatures. namely 30.60.90 and 120°C. The results revealed that preheating COME up to 90C leads to favorable effects on the BTE and CO emissions but causes higher NO_x emissions. Moreover. the brake power increases slightly with the preheating temperature up to 90° C.

L.kallivroussis (7)., points out that one requirement for an oil seed crop to be considered for Bio-Diesel production is that it provides a positive energy return compared with the energy used to produce the fuel. sunflower seed is a good source of Biomass, and a crop considered for Bio-Diesel production. The energy inputs and outputs were estimated to be 10.49 and 47.4 GJ ha⁻¹, respectively, which translates into an energy ratio of 4.5:1. The possibilities to reduce the energy inputs are very limited.

Micro Structure analysis of TIG Welded SS 301 Alloy

16-12-17

K Sreedhar¹, J Nithin Kumar², K Jithendar Reddy³,

^{1,3}Assistant Professor, Mechanical Department, GCET, Hyderabad, India

²Assoc. Professor, Mechanical Department, GCET, Hyderabad, India

Abstract: This work deals with micro structure analysis of TIG welding SS 301 plates of dimension 200*75*6 mm were taken, the. The input parameters are root gap, current, electrode diameter and gas flow rate. The main effects plots were plotted using Minitab software. the analysis is done with analysis software.

Keywords: TIG welding, SS, Hardness, root gap, S/N Ratio.

1. INTRODUCTION

GTAW welding is an electric arc welding process, in which the fusion energy is produced by an electric arc burning between the work piece and the tungsten electrode. During the welding process the electrode, the arc and the weld pool are protected against the damaging effects of the atmospheric air by an inert shielding gas. By means of a gas nozzle the shielding gas is lead to the welding zone where it replaces the atmospheric air. TIG welding differs from the other arc welding processes by the fact that the electrode is not consumed like the electrodes in other processes such as MIG/MAG and MM. Stainless steel is widely used in sheet metal fabrication, especially in automotive, chemical and rail coach manufacturing, mainly due to its excellent corrosion resistance and better strength to weight ratio. Stainless steel is a generic name covering a group of metallic alloys with chromium content in excess of 10.5 percent and a maximum carbon content of 1.2 percent (according to European Standard EN 10088) and often includes other elements, such as nickel and molybdenum. Due to formation of a passive layer, this is 1 to 2 nanometers thick; this metal exhibits excellent corrosion resistance. The passive layer is self-healing, and therefore chemical or mechanical damages to it re-passivity in oxidizing environments. Stainless steel has been widely used for rail vehicle body shell design for many years owing to its corrosion resistance, low life-cycle cost, and high strength-to-weight ratio and fire resistance.

1.1 Working Principle of TIG Welding Operation

TIG is an arc welding process, as shown in Fig. Wherein coalescence is produced by heating the work piece with an electrical arc struck between a tungsten electrode and the job. The electrical discharge generates a plasma arc between the electrode tip and the work piece to be welded. It is an arc welding process wherein coalescence is produced by heating the job with an electrical arc struck between a tungsten electrode and the job. The arc is normally initialized by a

power source with a high frequency generator. This produces a small spark that provides the initial conducting path through the air for the low voltage welding current. The arc generates high-temperature of approximately 6100 C and melts the surface of base metal to form a molten pool. A

welding gas (argon, helium, nitrogen etc) is used to avoid atmospheric contamination of the molten weld pool. The shielding gas displaces the air and avoids the contact of oxygen and the nitrogen with the molten metal or hot tungsten electrode. As the molten metal cools, coalescence occurs and the parts are joined. The resulting weld is smooth and requires minimum finish.

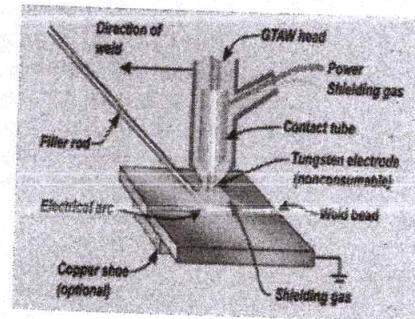


Figure 1 working principle of tig welding

2. EXPERIMENTAL PROCEDURE

In this work, SS 301 alloy of dimension 200*75*6mm was taken and the number of pieces were 18. Tig was performed the number of experiments were 9, the process parameters are Root gap, Current, Electrode and Gas flow rate

2.1 SS 301 chemical composition

Carbon	0.0582%
Chromium	16.0600%
Iron	72.6000%
Manganese	1.9300%
Nickel	6.5600%
Phosphorus	0.0649%
Silicon	0.3670%
Sulphur	0.005%

2.2 Common Applications of 301 Stainless Steel

- Aircraft structural parts
- Trailer bodies
- Architectural (roof drainage/door frames, etc.)
- Auto body trim and wheel covers
- Utensils and table wear
- Conveyor parts

DESIGN AND ANALYSIS OF COMPOSITE DRIVE SHAFT

Mr. N.RAJENDAR

Mr.K. NIRANJAN KUMAR

Assistant Professor in Department of Mechanical Engineering

GEETHANJALI COLLEGE OF ENGG AND TECH

Cheeryala(V), Keesara(M), Rangareddy Dist. Telangana, INDIA, Pin Code-501301.

ABSTRACT

This paper is design and analysis of composite drive shaft. Substituting composite structures for conventional metallic structures has many advantages because of higher specific stiffness and strength of composite materials. This work deals with the replacement of conventional steel drive shafts with a composite drive shaft. The design parameters were optimized with the objective of minimizing the weight of composite drive shaft. Advanced composite materials can be defined as combination of materials appropriately arranged using reinforcing fibers, carefully chosen matrixes, and sometimes auxiliary materials like adhesive core and fiber inserts. These combinations after proper manipulation and processing result in finished structure/item with synergistic properties i.e. properties achieved after fabrication cannot be obtained by individual components acting alone. FEM methods play a significant role in analyzing of Composite materials. Present work is conducted to analyze the composite drive shaft by the FEM software ANSYS 14.5. Results and graphs will be recorded and presented in the documentation.

I. INTRODUCTION

Nowadays, composite materials are used in large volume in various engineering structures including spacecrafts, airplanes, automobiles, boats, sports' equipments, bridges and buildings. The widespread use of composite materials in industry is due to the excellent characteristics such as, specific strength and specific hardness or strength-weight ratio and hardness-weight ratio. The application of composite materials started first at the aerospace industry in 1970s, but nowadays after only three decades, it has been developed in most industries. Meanwhile, the automotive industry, considered as a pioneer in every country, has been benefited from the properties and characteristics of these advanced materials. Along with progress in technology, metallic automotive parts have been replaced by composite ones. Power transmission drive shafts are used in many applications, including cooling towers, pumping sets, aerospace, structures, and automobiles. Drive shafts are usually made of solid or hollow tube of steel or aluminum. For automotive applications, the first composite drive shaft was developed by the Spicer U-Joint division of Dana Corporation for Ford economize van models . When the length of a steel drive shaft goes beyond 1500 mm, it is manufactured in two pieces to increase the fundamental natural frequency, which is inversely proportional to the square of the length and proportional to the square root of the specific modulus. The nature of composites, with their higher specific elastic modulus, which in carbon/epoxy exceeds four times that of aluminum, enables the replacement of the two-piece metal shaft with a single-component composite shaft which resonates at a higher rotational speed, and ultimately maintains a higher margin of safety. A composite drive shaft offers excellent vibration damping, cabin comfort, reduction of wear on drive train components and increases tire traction. In addition, the use of single torque tubes reduces assembly time, inventory cost, maintenance, and part complexity .Graphite/carbon/fiberglass/aluminum drive shaft tube was developed as a direct response to industry demand for greater performance and efficiency in light trucks, vans and high performance automobiles. Since carbon fiber epoxy composite materials have more than four times specific stiffness of steel or aluminum materials, it is possible to manufacture composite drive shaft s in one-piece.



Linear Static and Dynamic Analysis of Impeller Type Centrifugal Pump with Different Materials

B.Sajjan¹, A.Santhosh², M. Jaya ram³, K.Anusha⁴

Vatsalya Institute of Science and Technology, Bhongir, Nalgonda, India¹

Geethanjali College of Engineering and Technology, Cheeryal, Keesara, Hyderabad, India²

Vatsalya Institute of Science and Technology, Bhongir, Nalgonda, India³

Samskruti College of Engineering and Technology, Ghatkesar, Hyderabad, India⁴

Abstract:

This work deals with design of an Impeller type Centrifugal pump and do analysis using ANSYS WORK BENCH. The primary goal is to apply preload in the belt and to check deflections and stresses developed in impeller and pump housing. Different materials will be applied to pump and compared for internal induced stresses which should not exceed the elastic limit. The variation of von-mises stress, von-mises strain, deformation factor, natural frequencies, mode shapes for different materials can be taken into consideration. ANSYS DESIGN MODELER is used for modeling the parts and analysis is done in ANSYS WORKBENCH. ANSYS is dedicated finite element package used for determining the variation of stresses, strains and deformation across profile of the impeller. A structural analysis has been carried out to investigate the stresses, strains and displacements of the impeller.

Keywords: ANSYS work bench, Centrifugal pump, deformation factor, impeller, modal analysis, von-mises stress.

1. INTRODUCTION

A centrifugal pump is a kinetic device. Liquid entering the pump receives kinetic energy from the rotating impeller. The centrifugal action of the impeller accelerates the liquid to a high energy to the liquid. That kinetic energy is velocity, transferring mechanical (rotational) available to the fluid to accomplish work. In most cases, the work consists of the liquid moving at some velocity through a system by overcoming resistance to flow due to friction from pipes, and physical restrictions from valves, heat exchangers and other in-line devices, as well as elevation changes between the liquid's starting location and final destination. When velocity is reduced due to resistance encountered in the system, pressure increases. As resistance is encountered, the liquid expends some of its energy in the form of heat, noise, and vibration in overcoming that resistance. The result is that the available energy in the liquid decreases as the distance from the pump increases. The actual energy available for work at any point in a system is a combination of the available velocity and pressure energy at that point.

1.1 WORKING MECHANISM OF A CENTRIFUGAL PUMP

A centrifugal pump is one of the simplest pieces of equipment in any process plant. Its purpose is to convert energy of a prime mover (an electric motor or turbine) first into velocity or kinetic energy and then into pressure energy of a fluid that is being pumped. The energy changes occur by virtue of two main parts of the pump, the impeller and the volute or diffuser. The impeller is the rotating part that converts driver energy into the kinetic energy. The volute or diffuser is the stationary part that converts the kinetic energy into pressure energy.

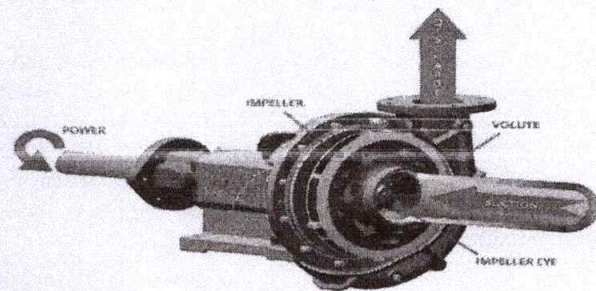


Figure 1.1: working mechanism of a centrifugal pump

1.2 GENERAL COMPONENTS OF CENTRIFUGAL PUMP

A centrifugal pump has two main components-

- I. A rotating component comprised of an impeller and a shaft
- II. A stationary component comprised of a casing, casing cover, and bearings

1.3 PUMP HOUSING (or) CASING

Casings are generally of two types: volute and circular. The impellers are fitted inside the casings.

1.4 SHAFT

The basic purpose of a centrifugal pump shaft is to transmit the torques encountered when starting and during operation while supporting the impeller and other rotating parts. It must do this job with a deflection less than the minimum clearance between the rotating and stationary parts.

Optimization of Welding Parameters in TIG Welded SS 301 Alloy using Taguchi Method

K. Jithendar Reddy¹, K.Sreedhar², J. Nithin Kumar³

Geethanjali College of Engineering and Technology, Cheryal, Keesara, Hyderabad, India
kallemjr@gmail.com¹, kasisreedhar2@gmail.com², nithinkumar.8787@gmail.com³

Abstract:

This work deals with optimization of welding parameters in TIG welded SS 301 alloy plates using Taguchi method, the optimization was done using L9 orthogonal array. The input parameters are root gap, current, electrode diameter and gas flow rate. Angular distortion test was performed to know the angle of deviation of welded plates. Hardness test was done using Rockwell hardness; indenter was diamond and the load applied was 100 kg. The responses are angular distortion and hardness. The signal to noise ratios were calculated, the main effect plots were plotted using Minitab software.

Keywords: TIG welding, SS 301, Hardness, root gap, electrode diameter, S/N Ratio

1. INTRODUCTION

GTAW welding is an electric arc welding process, in which the fusion energy is produced by an electric arc burning between the work piece and the tungsten electrode. During the welding process the electrode, the arc and the weld pool are protected against the damaging effects of the atmospheric air by an inert shielding gas. By means of a gas nozzle the shielding gas is lead to the welding zone where it replaces the atmospheric air. TIG welding differs from the other arc welding processes by the fact that the electrode is not consumed like the electrodes in other processes such as MIG/MAG and MMAW. Stainless steel is widely used in sheet metal fabrication, especially in automotive, chemical and rail coach manufacturing, mainly due to its excellent corrosion resistance and better strength to weight ratio. Stainless steel is a generic name covering a group of metallic alloys with chromium content in excess of 10.5 percent and a maximum carbon content of 1.2 percent (according to European Standard EN 10088) and often includes other elements, such as nickel and molybdenum. Due to formation of a passive layer, this is 1 to 2 nanometers thick; this metal exhibits excellent corrosion resistance. The passive layer is self-healing, and therefore chemical or mechanical damages to it re-passivity in oxidizing environments. Stainless steel has been widely used for rail vehicle body shell design for many years owing to its corrosion resistance, low life-cycle cost, and high strength-to weight ratio and fire resistance.

1.1 WORKING PRINCIPLE OF TIG WELDING OPERATION

TIG is an arc welding process, as shown in Fig. Wherein coalescence is produced by heating the work piece with an electrical arc struck between a tungsten electrode and the job. The electrical discharge generates a plasma arc between the electrode tip and the work piece to be welded. It is an arc welding process wherein coalescence is produced by heating the job with an electrical arc struck between a tungsten electrode and the job. The arc is normally initialized by a power source with a high frequency generator. This produces a small spark that provides the initial conducting path through the air for the low voltage welding current. The arc generates high-temperature of approximately 6100 C and melts the surface of base metal to form a molten pool. A welding gas (argon, helium, nitrogen etc) is used to avoid atmospheric

contamination of the molten weld pool. The shielding gas displaces the air and avoids the contact of oxygen and the nitrogen with the molten metal or hot tungsten electrode. As the molten metal cools, coalescence occurs and the parts are joined. The resulting weld is smooth and requires minimum finish.

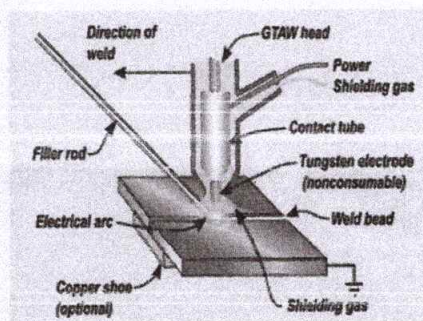


FIGURE 1
WORKING PRINCIPLE OF TIG WELDING

2. EXPERIMENTAL PROCEDURE

In this work, SS 301 alloy plates of dimensions 200*75*6mm were taken and 9 joints are made by varying the welding process parameters, the process parameters are Root gap, Current, Electrode diameter and Gas flow rate.

2.1 SS 301 CHEMICAL COMPOSITION

Carbon	0.0582%
Chromium	16.0600%
Iron	72.6000%
Manganese	1.9300%
Nickel	6.5600%
Phosphorus	0.0649%
Silicon	0.3670%
Sulphur	0.005%

2.2 COMMON APPLICATIONS OF 301 STAINLESS STEEL

- Aircraft structural parts
- Trailer bodies

PRINCIPAL
Geethanjali College of Engg. Tech.
Cheryal (M), Keesara (M), R.R. Dist. (A.P.) - 501 301

Analysis of Inner Rotor in a Georotor

V. Diwakar*, K. Venkatesh**

*Assistant Professor, Department of Mechanical Engineering, DhaneKula Institute of Engineering & Technology, Vijayawada-India.
**Assistant Professor, Department of Mechanical Engineering, Geethanjali College of Engineering & Technology, Hyderabad-India.

Abstract— For any gas turbine engines, various systems are involved for the safe and reliable operation, in that oil system plays a vital role for the engine lubrication. Oil pump is the most significant equipment as a part of engine oil system. The main function of oil pump in the engine is to supply lubricating oil to various rotating and sliding parts of an engine in order to prevent the wear & tear, excessive heat generated during the engine operation. The oil pump works on the principle of geo rotor (similar to internal gear arrangement) which is a positive displacement pump. The oil pump develops required pressure greater than the bearing chamber pressure and flow for maintaining the bearing temperature in the engine. The oil pump geo rotor is driven by the engine power through the gear box and quill shaft connected to oil pump driven shaft. In this research we designed the geo rotor with standard measurements by using pro/e software. Also analysis should be done by taking different materials of Vonmises Stress, Strain & Total Deformation

Keywords—Geo Rotor; Design; Vonmises Stress & Strain; Analysis

I. INTRODUCTION

The geo rotor is a positive displacement pumping unit compared with external and internal gear pumps; it keeps an advantage of less components, simple structure, low noise and low ripple of flow rate. Therefore it is widely used in applications of lubricating systems of on-road or off-road engines.

It mainly consists of inner rotor, outer rotor. The inner rotor lies inside the outer rotor and it positions itself at a fixed eccentricity from the outer rotor inside the housing.

Input torque is to drive the inner rotor and outer rotor rotates with it since they contact each other at less several points on their geometric profile. Geo rotors may be mounted directly on an existing shaft. Geo rotors can handle any flowing substances from air to hot melt glue. A single geo rotor set accommodates multiple flow streams operating at different pressures.

II. DESIGN OF GEOROTOR

Georotor was designed using Pro-E software with the specified dimensions

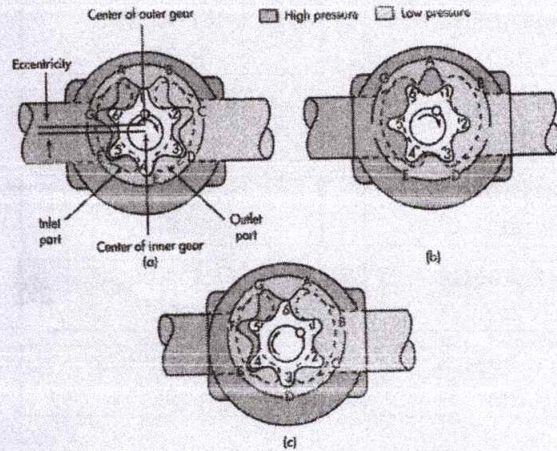


Fig-1

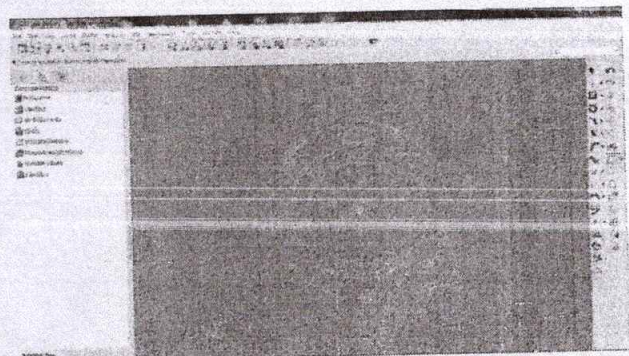


Fig-2

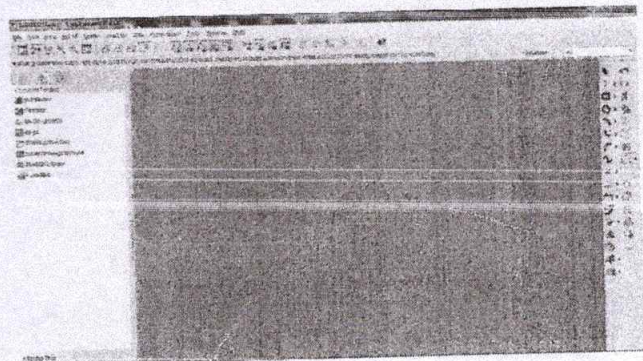


Fig-3

DESIGN AND FATIGUE ANALYSIS OF CHOKE VALVE BODY

N. SURESH ¹, B. SRINIVASA REDDY²

Assistant professor, Geethanjali College of Engineering and technology, Cheeryal, Hyderabad, TS, India.

ABSTRACT

Design and Fatigue Analysis of Choke Valve body component mainly involves in Modeling of Component and Fatigue life Analysis. Fatigue occurs when a material is subjected to repeat loading and unloading. If the loads are above a certain threshold, microscopic cracks will begin to form at the stress concentrators such as the surface, persistent slip bands (PSBs), and grain interfaces. The Choke valve is used in oil and gas production wells to control the flow of well fluids being produced. Another Purpose that the choke valves allow fluid flow through a very small opening, designed to kill the reservoir pressure while regulating the well production. The Choke valve Body Subjected to utmost Working Pressure Conditions , to withstand the body under heavy temperature and pressure conditions , I have opted F22 Material for Fabrication of this Choke valve Body. This report is to evaluate the fracture mechanics and fatigue life of a choke valve body subjected to 5000 N/MM working pressure at 50 °F. The purpose of this study was to determine the number of cycles the body can withstand at working pressure and hydro static test pressure. To analyze the body, the body was first Modeled in CAD with certain dimensions and then designed body was analyzed using Finite Element Analysis software ANSYS.

Keywords: choke valve, F22, Slip band, Elasticity.

I. INTRODUCTION

The component used in this Project is a Choke valve Body. Choke valve is used in oil and gas production wells to control the flow of well fluids being produced. Another purpose that the choke valves allow fluid flow through a very small opening, designed to kill the reservoir pressure while regulating the well production.

Choke valve is a type of valve designed to create a choked flow in a fluid line in an automobile. Choked flow is a compressible flow effect. It means "Choked" or "Limited" is the fluid velocity. When a flowing fluid at

a given pressure and temperature passes through a restriction such as convergent-divergent nozzle or Valve into a lower pressure environment the fluid velocity increases.

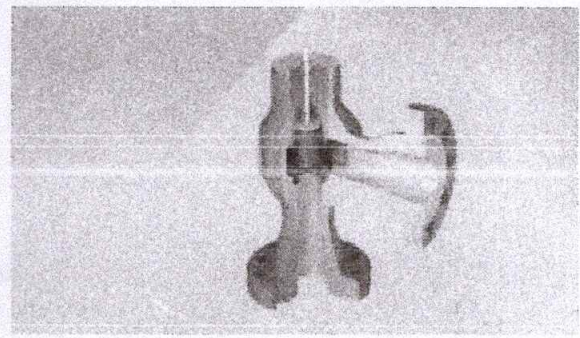


Figure: 1. Choke valve close position

Modeling And Machining Of Sheet Metal Dies And Inspection Fixtures

R. SATYA MAHIPAL REDDY¹, P. SREELATHA², Y. AKSHAY KUMAR³

^{1,2} Assistant Professor, Dep. Of Mechanical Engg, Geethanjali college Of engg. and Technology.
³ Assistant Professor, Dep. Of Mechanical Engg, CVSR college of engineering Hyderabad, India.

Abstract - Extrusion is a metal forming process, In this process the material is pushed or drawn through a die of desired cross-section to create long object of a fixed cross-section area, extrusion may be continuous (producing infinitely long material) or semi continuous (producing many pieces). The extrusion process can be done with the material hot or cold. There is gradual deformation which results in the uniform microstructure. Non-linear converging cosine dies profiles are used for square to square extrusion process. Extrusion through mathematically contoured die plays a critical role in improvement of surface finish of extruded product. The cosine die profile designed using CATIA, Solid works and MATLAB was used to find out the coordinate of the cosine die profile and solid model was generated using CATIA the STL files of extrusion dies generated by solid work and CATIA. The STL files are used in DEFORM-3D Software for FEM simulation. The work piece, punch and container with cosine die profiles are used in DEFORM-3D software for simulation purpose. Extrusion was assumed to be isothermal condition, for extrusion purpose Al- 6062 work material are used in DEFORM-3D Software. FEM modeling determine damage Strain-effective ((mm/mm)/sec), strain rate-effective ((mm/mm)/sec), stress-effective (M Pa), stress-Max principal (M Pa), Velocity Total Vel (mm/sec) and Temperature (C°). The results optioned during FEM simulation of Al-6062[FEA] are compared with the FEM simulation results of Tellurium Led [FEA]. For Extrusion process of Al-6062, the Extrusion load and pressure are more as compared to extrusion of Tellurium Lead under same percentage of Reductions and comparisons of load and pressure between Aluminum and Tellurium Lead during deformation process.

forming or metal working process is divided into two parts; Bulk forming and sheet metal forming. The Bulk forming refers to processes like Forging, Rolling

Extrusion etc. where there is a controlled plastic flow of material into required shapes. Forming process can be divided into three categories.

Cold Working < 0.4 T_m

Warm Working 0.4 - 0.6 T_m

Hot Working > 0.6 T_m

Where T_m is melting point of material (K)

Slab method of analysis: This method assumes that the metal deforms homogeneously in the deformation zone. A square lattice placed in the deformation zone would be inaccurate into four-sided elements. It is the easiest method and widely used in strength of material. It calculates the in homogeneity due to friction but neglects the in homogeneity due to friction at the die-work piece interface and also the influence of transverse stress. It calculates the average forming stress from the work of plastic deformation.

Slip line field theory: This method adopts or assumes the no homogeneous deformation and it is based on the element that any general state of stress in plain strain consists of pure shear plus a hydrostatic pressure. Slip line is in element of two [29] dimensional vector diagram, which shows the deviation of maximum shear stress identified with the direction of slip at any point. Slip line is always a network of lines passing through each other at right angle .It is made up by trial and error method.

Lower bound solution The power of deformation calculated from statistically admissible field which satisfies the Stress equilibrium and yield criterion is always lower than the actual one, it is called lower bound solutions. Lower bound solutions are those, which provide values for the total power, which are lower than the actual one. Here the first step is the design of a stress tensor, which is far more difficult to look on. It is more complex to examine, so less work has been achieved. For lower bound, the requirements are more stress free and the following conditions are not necessarily fulfilled. No need to maintain compatibility, No need to satisfy stress strain relation and Geometrical boundary condition don't have to be satisfied thus, only equation of equilibrium, yield criterion and

1. INTRODUCTION

Forming is the processes in which the wanted shape and size are achieved through the plastic deformation of a material .The stressed induced during forming process are greater than the yield strength, But less than the fracture strength of the material. Metal Forming operations such as forging, Rolling, Drawing etc. are capable of yielding high productivity compare to other metal working techniques. Metal forming is one of the most important process in manufacturing of a large variety of products. Metal

OPTIMIZED DESIGN AND ANALYSIS OF PEDESTAL BEARING HOUSE

PASUMARTHI. SREELATHA¹, YALAGANDALA AKSHAY KUMAR², R.SATYA MAHIPAL REDDY³

¹Assistant Professor, Dep. Of Mechanical Engg, Geethanjali college Of engg. and Technology, India.

²Assistant Professor, Dep. Of Mechanical Engg, CVSR College of Engineering, Hyderabad,

Abstract - The main aim of the project is to Modeling, Analysis and Manufacture of Pedestal Bearing House. A journal bearing is a machine element which supports another moving machine element known as journal. the basic use of a bearing is to support a frictionless environment and guide a rotating shaft. A good bearing material should be heat resistant, corrosion resistant. It should have good conformability, embed-ability. It should have high compressive strength to withstand high pressure. It should have proper endurance strength to avoid failure due to pitting. In order to reduce the frictional resistance and wear, and to carry away the heat generated, a layer of fluid which is known as lubricant has to provide to the bearing. The lubricant can be a gas, fluid, grease or solid of mineral oil, vegetable oil etc. Industrial machinery with a large horse power having high loads and speeds such as steam turbines, centrifugal pumps, compressors and motors, utilize journal bearing as rotor support. bearings may fall short in the improper load conditions, insufficient lubrication, contamination of lubricant, improper selection of bearing material; dust conditions, improper alignment. We have used CATIA software for modeling, ANSYS software for analysis and CNC Vertical Machining Centre for manufacturing the component CATIA (Computer Aided Three-Dimensional Interactive Application) modeling software is used to generate the 3-D solid model of master connecting rod. It is a multi-platform computer-aided design (CAD)/computer-aided manufacturing (CAM)/computer-aided engineering (CAE) software suite developed by the French company Dassault Systems. ANSYS software is used to analyze the design of Pedestal Bearing House. It is a analyzing software which offers engineering simulation solution sets in engineering simulation that all design process requires. The tools put a virtual product through a rigorous testing procedure before it becomes a physical object. It is used to analysis the stress strain deformation of Pedestal Bearing House by varying loads with same geometry. The machining pedestal housing is carried out in CNC Vertical Machining Centre. It works on automated movement with the help of programmable codes. The part program for the model of master connecting rod is developed based upon the drawing. Machining of components with complicated shapes including contours is difficult on conventional machines. CNC efficiently overcomes these problems. It has the advantages of repetitive accuracy and high productive rate over conventional machines with in less time.

Key Words: Pedestal Bearing House, CATIA software

1. INTRODUCTION

A Pedestal bearing is a machine element which supports another moving machine element known as journal. One of the basic purposes of a bearing is to provide a frictionless environment to support and guide a rotating shaft. A good bearing material should be heat resistant, corrosion resistant. It should have good conformability, embed ability. It should have high compressive strength to withstand high pressure. It should have proper endurance strength to avoid failure due to pitting and cracks. A Properly installed and maintained, pedestal bearing should have more life. It permits a relative motion between the contact surfaces of the members, while carrying the load with little loss of power due to friction. In order to reduce the frictional resistance and wear, and to carry away the heat generated, a layer of fluid which is known as lubricant has to provide to the bearing. The lubricant can be a gas, fluid, grease or solid of mineral oil, vegetable oil etc. Industrial machinery with a large horse power having high loads and speeds such as steam turbines, centrifugal pumps, compressors and motors, utilize journal bearing as rotor support. A bearing may fail in the improper load conditions, insufficient lubrication, contamination of lubricant, improper selection of bearing material, dust conditions, improper alignment etc.

1.1 Classification of turbines

There are mainly two types of Pedestal Housings:

- I) UN-SPLITHOUSINGS
- II) SPLIT HOUSINGS

I) UN-SPLIT HOUSINGS (SINGLE PIECE HOUSINGS)

The **Un-split Housings** are the type of pedestal housings are made as only one single piece where the bearing is placed in the hole made at the center of the metal piece, as shown in the figure below. The diameter of the hole of these housings will be of fixed sizes depending upon the requirement. The holes for these housings are made based on the outer diameter of the bearing which is going to be placed in it

Experimental Investigations on Prototypes Produced From Selective Laser Sintering

16-17-52

V Sandeepa

Assistant Professor

Geethanjali College of Engineering and Technology.

Kola Praveen

Assistant Professor

Geethanjali College of Engineering and Technology.

ABSTRACT

To increase productivity, industry has attempted to apply more computerized automation in manufacturing. Amongst the various technologies to take the industry by storm is rapid prototyping technology. RP technologies provide that bridge from product conceptualization to product realization in a reasonably fast manner, without the fuss of NC programming, jigs and fixtures. Rapid Prototyping (RP) can be defined as a group of techniques used to quickly fabricate a part or assembly using three-dimensional computer aided design (CAD) data. RP includes various technologies out of which selective laser sintering technology is prominent because SLS allows the production of fully functional prototypes with high mechanical and thermal resistance, strength & rigidity under the extreme conditions of high temperature. Durable metal parts, mold inserts, direct Low density complex investment casting patterns can be prepared directly from CAD data.

In this project, procedure for data preparation is presented and a total of six different models are created varying the orientation and job parameters. The prototypes which are then produced using SLS RP System are examined for various mechanical properties such as Tensile strength, Compressive strength, Young's modulus, deflection at maximum elongation using UTM and the microstructures of the prototypes are examined with the aid of Scanning electron Microscope (SEM) do determine the density, porosity and binding mechanism of the powder particles and its effect on strength and surface roughness is exposed. Surface roughness measurement, Vickers hardness and shore D

hardness of the laser sintered polyamide are obtained. The effect of laser speed and orientation of part on building time is investigated. The orange peel effect, delamination, effect of foreign particles are also discussed along with optimum part orientation to reduce the errors.

INTRODUCTION

1.1. Rapid Prototyping

Rapid Prototyping (RP) can be defined as a group of techniques used to quickly fabricate a scale model of a part or assembly using three-dimensional computer aided design (CAD) data. What is commonly considered to be the first RP technique, Stereolithography, was developed by 3D Systems of Valencia, CA, USA. The company was founded in 1986, and since then, a number of different RP techniques have become available.

1.3. Methodology of Rapid Prototyping

The basic methodology for all current rapid prototyping techniques can be summarized as follows:

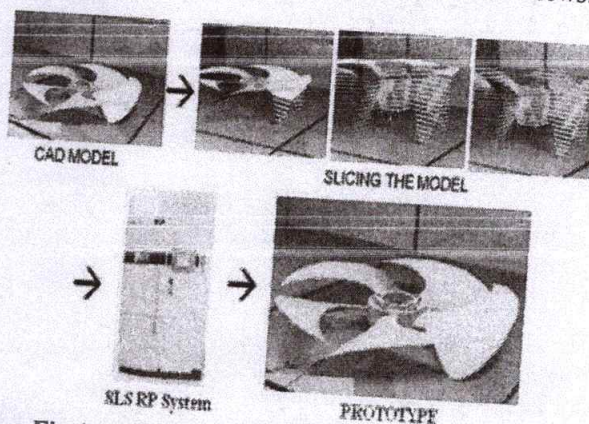


Fig 1.1: Methodology of Rapid Prototyping



Laser Marking of Circular Grid Pattern for Plotting Strain Variation of Deep Drawing of Cylindrical Component

16-D-53

Yalagandala Akshay Kumar
M.Tech Student,
Department of MECH (Machine
Design),
CVSR College of Engineering,
Hyderabad, India.

A Neeraja
Assistant Professor,
Department of Mechanical
Engineering,
CVSR College of Engineering,
Hyderabad, India.

Kola Praveen
Assistant Professor,
Department of Mechanical,
Geethanjali College of Engg &
Technology,
Hyderabad, India.

Abstract

Laser marking is used in marking logos and batch code on metal products, mostly used for a permanent marking. By using this technology, we are creating circular grid marking completely covering the sheet. This will help us to plot the major and minor strains by the elongations formed after drawing the cup the circles will elongate at various points of cup. Circular marking of 5mm diameter is used. CAD model and assembly of this deep drawing is done using CATIA V5.

Keywords—laser marking; circular grid; strain variation; CATIA V5.

Introduction

Deep drawing is a sheet metal formation process where the sheet metal forms into various shapes by forcing the sheet metal into the die cavity with the help of a punch. Here the sheet metal is constrained by the blank holder such that punch force acts at the center of the blank and takes the shape of the die. A sheet metal can be drawn into cylindrical, conical and rectangular box shape components. few complicated shapes both axis-symmetric and nonaxis-symmetric components are drawn in various no of stages to meet its required complex shapes. Both the die and punch experience wear from the forces applied to the sheet metal. The process of drawing the part sometimes occurs in a series of operations, called draw reductions. In each step, a punch forces the part into a different die, stretching the part to a greater depth each time. After a part is completely drawn, the punch and blank holder

can be raised and the part removed from the die. The portion of the sheet metal that was clamped to the blank holder may form a flange around the part that can be trimmed off. The tensile forces applied to the sheet cause it to plastically deform into a required part. Deep drawn parts are characterized by a depth equal to more than half of the diameter of the part. These parts can have a variety of cross-sections with straight, tapered, or even curved walls, but cylindrical or rectangular parts are most common. Deep drawing is most effective with ductile metals, such as aluminum, brass, copper, and mild steel. Examples of parts formed with deep drawing include automotive bodies and fuel tanks, cans, cups, kitchen sinks, and pots and pans.

1. NOTATIONS OF DEEP DRAWING

To project the interaction parameters in forming a cylindrical cup the following fig 1.1 notations have been used.

- D_0 : Diameter of a circular sheet blank.
- t_0 : Thickness of the circular sheet blank.
- R_d : Corner radius of the die opening.
- D_p : Punch diameter.
- R_p : Corner Radius of the punch.
- C: clearance

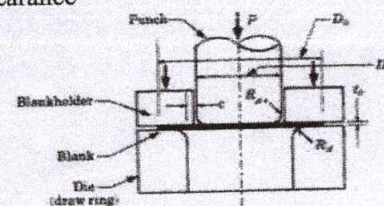


figure 1.1



Common Random Fixed Point Theorems in Probabilistic Metric Spaces

Dr. A. Padma¹, Dr. G. Venkat Reddy²

Associate professor, Geethanjali College of Engineering and Technology, India¹
Department of Mathematics, Wollo University Ethiopia²

Abstract:

In this paper we prove common fixed point theorems in probabilistic metric space by using the concept of β -compatible mapping and weakly compatible mapping in randomized fuzzy metric space.

Key words: Common fixed point, fuzzy metric space, compatible maps, and weakly compatible continuous t -norm, randomized fuzzy metric space.

Introduction

Probabilistic functional analysis has emerged as one of the important mathematical disciplines in view of its role in analyzing Probabilistic models in the applied sciences. The study of fixed point of random operator forms a central topic in this area. Random fixed point theorem for contraction mappings in Polish spaces and random Fixed point theorems are of fundamental importance in probabilistic functional analysis. This study was initiated by the Prague school of Probabilistics, in 1950, with their work of Spacek [15] and Hans [5,6]. For example survey are refer to Bharucha-Reid [4]. Itoh [8] proved several random fixed point theorems and gave their applications to Random differential equations in Banach spaces. Random coincidence point theorems and random fixed point theorems are stochastic generalization of classical coincidence point theorems and classical fixed point theorems. Sehgal and Singh [14], Papageorgiou [12], Rhoades, Sessa, Khan [13] and Lin [11] have proved differential Stochastic version of well known Schauder's fixed point theorem. Recently, Beg and Shahzad [3] studied the structure of common fixed point and random coincidence Points of a pair of compatible random operators.

In this paper we prove common fixed point theorems in probabilistic metric space by using the concept of β -compatible mapping. First we give some basic and important definitions related to this paper.

Definition 1.1.1. Let X be any set. A fuzzy set in X is a function with domain X and values in $[0,1]$.

Definition 1.1.2. A binary operation $*$: $[0,1] \times [0,1] \rightarrow [0,1]$ is continuous t -norm if $*$ is satisfying the following conditions:

1.1.2 (a) $*$ is commutative and associative,

1.1.2 (b) $*$ is continuous,

1.1.2 (c) $a * 1 = a$ for all $a \in [0,1]$

1.1.2 (d) $a * b \leq c * d$ whenever $a \leq c$ and $b \leq d$,

for all $a, b, c, d \in [0,1]$

Examples of t -norm are $a * b = \min\{a, b\}$ and $a * b = ab$.

Definition 1.1.3. A triplet $(X, M, *)$ is a fuzzy metric space whenever X is an arbitrary set, $*$ is continuous t -norm and M is fuzzy set on $X \times X \times [0, \infty^+)$ satisfying, for every $x, y, z \in X$ and $s, t > 0$, the following condition:

1.1.3 (a) $M(x, y, t) > 0$

1.1.3 (b) $M(x, y, 0) = 0$

1.1.3 (c) $M(x, y, t) = 1$ iff $x = y$

1.1.3 (d) $M(x, y, t) = M(y, x, t)$

1.1.3 (e) $M(x, y, t) * M(y, z, s) \leq M(x, z, t + s)$

1.1.3 (f)

$M(x, y, \cdot) : (0, \infty^+) \rightarrow [0,1]$ is continuous.

We note that, $M(x, y, t)$ can be realized as the measure of nearness between x and y with respect to t . It is known that $M(x, y, \cdot)$ is non decreasing for all $x, y \in X$. Let $M(x, y, *)$ be a fuzzy metric space for $t > 0$, the open ball

$$B(x, r, t) = \{y \in X : M(x, y, t) > 1 - r\}.$$



Non-Linear Taft Relationship applied to surface tensions of aliphatic acids: Inter-molecular hydrogen bonding versus intra-molecular hydrogen bonding

Sanjeev Rachuru^a, Jagannadham Vandanapu^{b,*}, Adam A. Skelton^c

^a Department of Chemistry, Geethanjali College of Engineering and Technology, Cheeryala-501301, Rangareddy Dist., Telangana, India

^b Department of Chemistry, Osmania University, Hyderabad 500007, India

^c Department of Pharmacy, School of Health Science, University of KwaZulu-Natal, Durban, South Africa

ARTICLE INFO

Article history:

Received 15 June 2016

Received in revised form 9 September 2016

Accepted 11 September 2016

Available online 28 September 2016

Keywords:

Taft equation

Inter-molecular hydrogen bonding

Intra-molecular hydrogen bonding.

ABSTRACT

Hammett and Taft equations in their most basic forms are linear free energy relationships between energies of two reaction series. Therefore any chemical or physical property inherently associated thermodynamic property like enthalpy H , free energy G , internal energy E or entropy S are subjected effects. One such physical property is the surface tension. Surface tension is a kind of surface property of any liquid and is also supposed to be effected by the structure of liquids. Hence the present study intended to see the effect of substituents on surface tension of some aliphatic acids. The quick glance study ended up with a non-linearity of Taft equation to the surface tension data of aliphatic acids. The earlier Taft Relationship (NLTR) was applied to surface tensions (γ) of some aliphatic acids. The non-linear versus Taft σ^* correlation was explained in terms of inter-molecular hydrogen bonding versus intra-molecular hydrogen bonding and in terms of steric effects.

© 2016 Elsevier B.V. All rights reserved.

1. Introduction

Though the Hammett [1] and Taft [2] equations are nearly more than seventy five years old, they enjoyed outstanding application for predicting the organic reaction mechanisms among physical organic chemists. Ever since the Hammett [1] and Taft [2] equations were developed, there were several hundreds of reactions in literature, for which the Hammett and Taft reaction constants (ρ and ρ^*) were reported. Though the application of Linear Free Energy Relationships to chemical reactions [3–24] and physical properties [25–30] is quite promising in its nature, application of non-linear Taft equation to the reactions of benzyl bromide with *N*-substituted benzyl amines is first of its kind in literature and of recent origin from our laboratory [31]. In the present article we have tried to apply non-linear Taft equation to physical properties like surface tensions of some aliphatic acids. To our knowledge the present study is first of its kind in literature. The non-linearity of Taft correlation was explained in terms of inter-molecular hydrogen bonding versus intra-molecular hydrogen bonding of the aliphatic acids and in terms of steric effects.

2. Experimental data source

Data on surface tensions of aliphatic acids is from references cited therein. The Taft σ^* values of alkyl substituted acids are from references [33,34] and of halogen substituted acids are from reference [35]. Thermo chemical data is from reference [36]. All correlations were done using the KaleidaGraph software, USA.

3. Discussion

A molecule in the bulk of a liquid is completely surrounded by other molecules; therefore it is attracted equally in all directions. A molecule on the surface has an attraction inward because there are more molecules per unit volume is greater in liquid than in vapor. As vapor is a dilute system. Due to this inward pull, the surface of a liquid always tends to contract to have minimum possible area. In order to increase the area of the surface, it is necessary to do work, to bring molecules from the bulk of the liquid into the surface, against the attractive force. The work required to increase the surface area by 1 sq. cm is called surface free energy [37].

As a result of this tendency to contract, a surface behaves as if it were in a state of tension. If a cut were made along any line in the surface, a force would have to be applied to hold the separate portions of the surface together. This force is proportional to the length of the cut. The value per unit length is called surface tension or interfacial tension.

* Corresponding author.

E-mail addresses: rachuru1sanjeev1@rediffmail.com (S. Rachuru), jagannadham1950@yahoo.com (J. Vandanapu), Skelton@ukzn.ac.za (A.A. Skelton).

PADLET - A Collaborative Language Teaching and Learning Tool

. Nagamani

Associate Professor of English, Geethanjali College of Engineering & Technology,
Vidarbha
mail : santoshellu@gmail.com

ABSTRACT

Technological sophistication is a significant and promising force for increasing efficiency in education more so in English language teaching and learning. In the past, most teaching was either verbal communication between the teacher and students or written communication from printed materials. These communication channels continue to play important roles in the teaching-learning process even today, though students are learning from pictures, television, recorded lessons and other media. Today, almost all educational institutions around the world use some form of technological media in education. Most technological devices and programmes are prepared to suit the needs of the teacher, students and their learning conditions. The present article discusses the role of ICT in improving the four language skills of engineering students.

Key words: Technological sophistication, ICT, technological tools.

Technological advancement has provided teachers with wealth of information. Music, myth, mystery or history can be brought in the class as never before. Language learning and teaching should not be restricted to the four walls of the classroom. With this as a basic premise a Padlet is created to teach English language to students of our college.

Objectives

- To provide opportunities to learn language beyond classroom
- To integrate technology into language learning
- To provide opportunity for peer learning

Definition & explanation of a Padlet:

Padlet, previously known as Wall Wisher, is a free tool used to create an online bulletin board. It is used to provide information to its users on any topic. Information can be typed on the padlet. Students can record their voices to check for pronunciation errors. This is very helpful especially when they prepare for presentations or seminars. Hyperlinks can be provided for the learners to read further on a topic discussed either in the class or through the padlet. Images, links and videos can be uploaded on the padlet. Padlet wall can either be private, or open to the public. It can also be moderated by

the person who has created it. The background of the padlet can be edited. This editing option available for editing the background creates interest to the readers. Background theme can be selected keeping in mind the latest technological, scientific, business and legal issues of the country. Posts can be added anywhere on the padlet, or can be posted one below the other or can be displayed in a grid-like layout.

Padlet has good security features. Controlling and monitoring of the padlet is also very easy. There are many options available for organizing the padlet. It can be made private, public, password protected or can moderate everything. If the wall is moderated by the teacher all contributions are approved by him/her before they are shown on the padlet.

Advantages:

Padlet is a very simple web tool which can be put into use by any teacher. To use a padlet one need not be very proficient in using computers. This tool can be used by teachers irrespective of their age group, knowledge of computers and experience.

Uses of a Padlet:

Inculcates reading habit:

Students can share their thoughts on any book they read. In fact, teachers can form a reading club of the class or college. Members of the club post their thoughts on the book they read. This creates interest and generates reading habit among the

students. Students can discuss characters, theme and plot. Interesting quotes taken from the book and many more can be shared. Teachers can spark enthusiasm among the students by presenting the printed padlet page for face to face discussion.

Summarizing:

Teachers can summarize large amount of information and present the same in a visually appealing manner to the learners.

Opinion Poll:

Teachers can post topics based on current issues or topics. This will enable the students to analyze an issue in various respects and post their opinions. Students develop writing skills. They learn to write opinion pieces and persuasive essays.

Peer Learning:

Padlet gives an opportunity to the students to learn from each other. Gathering ideas and sharing ideas not only improves their perception, but will also enable them to look at a particular idea from various perspectives.

Listening:

Audio files and videos can be uploaded on the padlet. Thus the students get many opportunities to listen actively.

Writing:

As students write on different topics as posted on the Padlet, it improves their writing skills.

PRINCIPAL
Geethanjali College of Engineering & Technology
Chengal (V), Kasaragod District, Kerala - 691 304

3

Thermal Effects of Two Immiscible Fluids in a Circular Tube with Nano Particles

K. Maruthi Prasad¹, N. Subadra^{2,*}, and M. A. S. Srinivas³

¹ Department of Mathematics, School of Technology, GITAM University, Hyderabad Campus, Hyderabad, Telangana 502329, India

² Department of Mathematics, Geethanjali College of Engg. and Tech., Cheeryal (V), Keesara (M), R. R. Dist., Telangana 501301, India

³ Department of Mathematics, JNTUH, Kukatpally, Hyderabad, Telangana 500085, India

The paper deals with a theoretical investigation of thermal effects of two immiscible fluids in a circular tube with nano particles. The closed form expressions for pressure drop, time averaged flux, velocity in the peripheral region as well as in the core regions, frictional force and mechanical efficiency have been investigated. Effects of different physical parameters like micropolar parameter, coupling number, viscosity ratio, mean radius of the central layer, Brownian motion parameter, thermophoresis parameter, local temperature Grashof number as well as local nano particle Grashof number on pressure drop characteristics, frictional force, mechanical efficiency, heat transfer coefficient, mass transfer coefficient, velocity profiles in the core region and streamline patterns of the fluid are studied. The computational results are presented in graphical form.

KEYWORDS: Peristalsis, Nano Particles, Homotopy Perturbation Method, Peripheral Layer, Heat Transfer Coefficient, Mass Transfer Coefficient.

1. INTRODUCTION

The peristaltic transport has prime importance for transporting of fluid from lower pressure region to higher pressure region. It is because of the contraction of muscles travelling in waves along a tube like structure. It is due to the presence of neuron-muscular properties of tubular smooth muscles in physiological processes. This kind of activity is generally prevalent in the gastrointestinal, urinary, reproductive tracts, small blood vessels, intestines, lymphatic vessels and many other glandular ducts in a living body. The industrial applications of this mechanism is observed and used in sanitary and corrosive fluid transport, in rollers, finger pumps, hose pumps and blood pump in heart lung machine. This phenomenon of transporting toxic liquid is used in nuclear industry.

In view of its importance, many researchers investigated peristaltic transport of Newtonian and non-Newtonian fluids under various conditions. Peristaltic transport has been studied by Fung and Yih.¹ Shapiro et al.² studied peristaltic pumping with long wavelengths at low Reynolds number. Prasad and Radhakrishnamacharya³ investigated effect of peripheral layer on peristaltic transport of a couple-stress

fluid. Hayat et al.⁴ studied peristaltic transport of Carreau-Yasuda fluid in a curved Channel with slip effects. Flow of a Jeffery fluid through a porous medium in narrow tubes was studied by Santhosh et al.⁵

Micropolar fluid is a non-Newtonian fluid that belongs to a class of fluids with non-symmetrical stress tensor and is referred to as polar fluid. It represents a fluid consisting of randomly scattered particles suspended in a viscous medium. It is realized that micropolar fluid accounts for the rotation of fluid particles by means of an independent kinematic vector called microrotation vector (Eringen,⁶). As a result micropolar fluid model is more appropriate to investigate the behavior of lubricants, colloidal suspensions, polymeric fluids, liquid crystals and physiological fluids. Peristaltic transport of a micropolar fluid was studied by Devi and Devanathan.⁷ Prasad et al.⁸ studied peristaltic pumping of a micropolar fluid in an inclined tube. Slip effect on peristaltic transport of micropolar fluid was investigated by Chaube et al.⁹ Wang et al.¹⁰ studied peristaltic motion of a magneto hydrodynamic micropolar fluid in a tube. Effect of Slip Velocity on Peristaltic transport of a magneto-micropolar fluid through a porous non-uniform channel was investigated by Shit and Roy.¹¹ MHD peristaltic transport of a micropolar fluid in an asymmetric channel with porous medium was investigated by Satyanarayana et al.¹²

* Author to whom correspondence should be addressed.
Email: nernani.subhadra@gmail.com
Received: 22 August 2016
Accepted: 3 October 2016

Experimental and Quantum Mechanical Study of Nucleophilic Substitution Reactions of *meta*- and *para*-Substituted Benzyl Bromides with Benzylamine in Methanol: Synergy Between Experiment and Theory

Rachuru Sanjeev,^A Rarnavath Ravi,^B Vandanapu Jagannadham,^{B,C} and Adam A. Skelton^{A,C}

^ADepartment of Pharmacy, School of Health Science, University of KwaZulu-Natal, Durban 4000, South Africa.

^BDepartment of Chemistry, Osmania University, Hyderabad-500007, India.

^CCorresponding authors. Email: jagannadham1950@yahoo.com; Skelton@ukzn.ac.za

This work involves the experimental and theoretical study of the nucleophilic substitution of *meta*- and *para*-substituted benzyl bromides with benzylamine. Conductometric rate experiments confirm the applicability of the Hammett linear free-energy relationship to this system. To gain a deep understanding of the physical chemistry at play, a quantum mechanical study of the reaction is also conducted. The quantum mechanical calculations not only reproduce the experimental free energy of activation, but also provide greater insights at the molecular and atomic level. Isolation of the calculated transition state structure and application of the Hammett equation to its electronic, structural, and energetic properties are studied.

Manuscript received: 2 February 2016.

Manuscript accepted: 9 June 2016.

Published online: 18 July 2016.

Introduction

Since its genesis, a massive body of experimental work has emerged related to Hammett's equation^[1,2] applied to reaction mechanisms in chemistry.^[3–12] The Hammett equation describes the effect of substituents (at *meta* and *para* positions) linked to an aromatic series on the reaction rate and equilibrium constants relative to the substituents attached at *meta* and *para* positions of ionization of benzoic acids in water at 25°C. Furthermore, the Hammett constants were applied to certain fundamental properties, such as steric effects, nucleophilicity, and solvent effects, and structure–reactivity correlations were developed.^[13–15] In the present work, we apply the Hammett relation not only to the reaction under study in the conventional sense, i.e. plot of experimentally and theoretically obtained reaction rate constants versus the Hammett σ values, but also to various theoretically obtained properties of the calculated transition state structure.

In an earlier study,^[16] we conducted an experimental study on nucleophilic substitution reactions of *meta*- and *para*-substituted benzylamines with benzyl bromide in methanol; the study showed that the reaction rate of the S_N2-type mechanism conformed to the Hammett relation. The nucleophilic substitution of *meta*- and *para*-substituted benzyl bromides with benzylamine should also proceed via a similar S_N2 mechanism. Thus, an experimental study on the nucleophilic substitution of *meta*- and *para*-substituted benzyl bromides with benzylamine was performed to assess the applicability of the Hammett linear free-energy relationship (LFER).

With the advent of the density functional theory (DFT) and advanced software such as *Gaussian*,^[17] it is possible to isolate and visually observe the calculated transition state structure of the above S_N2 reaction. Thus, we consider a theoretical study on the reaction in question to gain deep insights into various properties of the calculated transition state structure; such insights cannot be obtained from studies that only employ experimental techniques. Synergistic studies between experiment and theory have gained immense prominence,^[18–22] and the present study aptly fits into this genre.

DFT has been used to study many S_N2 reactions.^[23–33] For instance, Singh and Goel conducted a mechanistic study on the Menshutkin reaction between 1,4-diazabicyclo[2.2.2]octane and benzyfluoride or fluorodiphenylmethane using DFT calculations at the B3LYP/6-31G(d,p) level of theory.^[34] One of their important conclusions was that the reaction between 1,4-diazabicyclo[2.2.2]octane and benzyl fluoride proceeds through a polar S_N2 transition state mechanism, in agreement with earlier literature, whereas the reaction with fluorodiphenylmethane proceeds through a five-membered ring transition state. As this is contrary to the literature, molecular modelling was used by Singh and Goel to understand the Menshutkin reaction mechanism in greater depth.

Pineda et al.^[35] studied the hydrolysis of a chlorambucil analogue by DFT. Three S_N1 and one S_N2 reaction mechanisms were proposed. Finally, through theoretical studies, the authors ruled out the S_N2 mechanism and concluded that the most favourable mechanism of hydrolysis occurred through the

16-17-55

16-17
89
30

Effects of Variable Viscosity and Thermal Conductivity on MHD Boundary Layer Flow of Nanofluid with Thermal Radiation

Balla Chandra Shekar^{1,*}, Alluguvelli Ramesh², and Naikoti Kishan¹

¹Department of Mathematics, Osmania University, Hyderabad, Telangana, India

²Geethanjali College of Engineering and Technology, Hyderabad, Telangana, India

In this paper, the effects of variable viscosity and thermal conductivity on magnetohydrodynamic boundary layer flow of nanofluid over a stretching sheet in porous medium are investigated. By taking suitable similarity variables, the governing boundary layer equations are transformed into a boundary value problem of coupled nonlinear ordinary differential equations and solved numerically using the weighted residual finite element method. The numerical results for the velocity, temperature and nanoparticle volume concentration together with the skin friction coefficient, Nusselt number and Sherwood number are presented. The effects of various parameters such as Hartmann number H_a , Darcy number Da , thermal Grashof number Gr_1 , concentration Grashof number Gr_2 , radiation parameter R_d , Prandtl number Pr , viscosity parameter λ , thermal conductivity parameter n , Lewis number Le , Brownian motion parameter Nb and thermophoresis parameter Nt on the flow, heat and nanoparticle volume concentration are illustrated in tabular and graphical forms. A comparison with previously published results on special case of the problem shows excellent agreement.

KEYWORDS:

1. INTRODUCTION

Natural convection flow is frequently encountered in our environment and engineering devices. Free convection flow is caused by the temperature difference and also the flow is affected by the difference in concentration of material constitution. Quite often one can observe that both heat and mass transfer occur simultaneously in free convection. This study of flow phenomena has a wide range of applications in the field of science and technology. Free convective flow past a vertical plate has been studied extensively by Ostrach¹ and many others. The free convective heat transfer on vertical semi-infinite plate was investigated by Berezovsky et al.² Martynenko et al.³ investigated the laminar free convection from a vertical plate. Gebhart and Pera⁴ observed the steady state natural convection on a vertical plate with variable surface temperature and variable mass diffusion. Using similarity variables they solved the boundary layer equations. Callahan and Marner⁵ solved the problem of transient free convection with mass transfer on an isothermal vertical plate by using an explicit finite difference scheme. Soundalgekar

and Ganesan⁶ have solved the problem for transient free convection with mass transfer on a vertical plate with constant heat flux by using an implicit finite difference scheme.

The study of magnetohydrodynamics plays an important role in agriculture, engineering and petroleum industries. The problem of free convection under the influence of a magnetic field has attracted the interest of many researchers in view of its applications in geophysics and astrophysics. The problem under consideration has important applications in the study of geophysical formulations; in the explorations and thermal recovery of oil; and in the underground nuclear waste storage sites. Magnetohydrodynamics has its own practical applications too. For instance, it may be used to deal with problems such as cooling of nuclear reactors by liquid sodium and induction flow meter, which depends on the potential difference in the fluid in the direction perpendicular to the motion and to the magnetic field. Soundalgekar et al.⁷ analysed the problem of free convection effects on Stokes problem for a vertical plate under the action of transversely applied magnetic field. Sacheti et al.⁸ obtained an exact solution for unsteady magnetohydrodynamics free convection flow on an impulsively started vertical plate with constant heat flux. Shanker and Kishan⁹ discussed the effect of mass transfer on the MHD flow past an impulsively

*Author to whom correspondence should be addressed.

Email: shekar.balla@gmail.com

Received: 22 June 2016

Accepted: 11 August 2016

ARTICLE

PRINCIPAL

Geethanjali College of Engg. Tech.
Cheeryal (V), Keesara (M), R.R. Dist. (A.P.) - 501 201

Peristaltic Transport of a Couple-Stress Fluid with Nanoparticles Having Permeable Walls

K. Maruthi Prasad¹, N. Subhadra^{2,*}, and S. Karunakar Reddy³

¹ Department of Mathematics, School of Technology, GITAM University, Hyderabad Campus, Hyderabad 502329, Telangana, India

² Department of Mathematics, Geethanjali College of Engg. and Tech., Cheeryal (V), Keesara (M), R. R. Dist. 501301, Telangana, India

³ Department of Mathematics, JNTU-H, Kukatpally, Hyderabad 500085, Telangana, India

The paper deals with a theoretical investigation of the peristaltic transport of a couple-stress fluid with heat and mass transfer effects. The velocity, pressure drop, time averaged flux, frictional force, mechanical efficiency, temperature profile, nano particle phenomena, heat transfer coefficient and mass transfer coefficient of the fluid are investigated, when the Reynolds number is small and wave length is large by using appropriate analytical methods. Effects of different physical parameters like couple-stress fluid parameters, Brownian motion parameter, thermophoresis parameter, local temperature Grashof number as well as local nano particle Grashof number on pressure drop characteristics, frictional force, heat transfer coefficient, mass transfer coefficient and stream line patterns of the fluid are studied. The expressions for pressure drop, temperature profile, nano particle phenomenon, heat transfer coefficient and mass transfer coefficients are sketched through graphs. The streamlines are drawn to discuss trapping phenomena for some physical quantities.

KEYWORDS: Peristalsis, Couple-Stress Fluid, Brownian Motion Parameter, Thermophoresis Parameter, Heat Transfer Coefficient, Mass Transfer Coefficient.

1. INTRODUCTION

Peristalsis is an important mechanism for fluid transport which can be generated by the propagation of waves along the walls of a flexible tube containing liquid. Physiologically, it is known as an automatic and vital process that drives the urine from kidney to bladder through the ureters, food through the digestive tract, bile from the gall bladder into the duodenum, vasomotion in small blood vessels and so on. The peristaltic transport is also exploited in industrial pumping as it provides efficient means for sanitary fluid transport in nuclear industries and in roller pumps. Several investigations have analyzed the peristaltic motion of both Newtonian and non-Newtonian fluids in physiological as well as mechanical systems.¹⁻⁶

Couple-stress fluid is a special case of non-Newtonian fluid which was developed by Stokes.⁷ The important feature of these fluids is that the stress tensor is not symmetric and their accurate flow behaviour cannot be predicted by the classical Newtonian theory. The main effect

of couple stresses will be introducing a size dependent effect that is not present in the classical viscous theories. Shehawey and Mekheimer,⁸ studied Couple-stresses in peristaltic transport of fluids. Effect of peripheral layer on peristaltic transport of a couple-stress fluid was investigated by Prasad and Radhakrishnamacharya.⁹ Alemayehu and Radhakrishnamacharya,⁵ discussed dispersion of a solute in peristaltic motion of a couple-stress fluid through a porous medium with slip condition. Hydromagnetic effect on inclined peristaltic flow of a couple stress fluid was investigated by Shit and Roy.¹⁰

Nanofluid is a fluid containing nano-sized particles called nanoparticles. These fluids are engineered colloidal suspensions of nanoparticles in a base fluid. The nanoparticles used in nanofluids are typically made of metals, oxides, or carbon nanotubes. Nanofluids have new properties that make them potentially useful in many applications in heat transfer, including microelectronics, fuel cells, pharmaceutical processes and hybrid powered engines.¹¹ They exhibit enhanced thermal conductivity and the convective heat transfer coefficient compared to the base fluid. Many researchers have done their research in nanofluid technology. A benchmark study on the thermal conductivity of nanofluids was done by Buongiorno et al.¹²

*Author to whom correspondence should be addressed.
Email: nemani.subhadra@gmail.com
Received: 24 December 2016
Accepted: 23 January 2017

16-17
8



Check for updates

Online: February 2017
December 2016

magnetic moment through cation distribution and magnetocrystalline anisotropy studies in R_xO_4 (R = Y and Lu; x = 0, 0.05, and 0.075)

Godam¹, Kamala Bharathi K², Raghavendra Reddy V³, Sudhindra Rayaprol⁴, Vasudeva Siruguri⁴

Journal of Applied Physics **121**, 055101 (2017); doi: <http://dx.doi.org/10.1063/1.4973880>

Topics: Magnetic moments · Nickel · X-ray diffraction · X-ray photoelectron spectroscopy

ABSTRACT

Magnetic moments through cation distribution and magnetocrystalline anisotropy studies of R_xO_4 (R = Y and Lu; x = 0, 0.05, and 0.075) compounds were investigated, and the results are discussed and presented in this paper. All the compounds were prepared by solid state reaction, and the compounds were in the cubic inverse spinel phase with the space group $\text{Fd}\bar{3}m$. The cation distribution, bond lengths, *etc.* were estimated through the Rietveld refinement of XRD patterns. Increment in the lattice constant was observed upon partial substitution of Fe^{3+} by $\text{Y}^{3+}/\text{Lu}^{3+}$. The presence of all elements and their oxidation states were confirmed from X-ray photoelectron spectroscopy studies. Analyses of Mössbauer spectra revealed that the hyperfine fields and the magnetic moments at the B-site (and hence net moment) decreased with increasing $\text{Y}^{3+}/\text{Lu}^{3+}$ occupancy and that the compounds exhibited a Néel-type, collinear ferrimagnetic ordering. Magnetization measurements revealed that the magnetic moment decreased with $\text{Y}^{3+}/\text{Lu}^{3+}$ substitution. The high field regimes of the magnetization curves were modeled using the law of approach to saturation magnetization equation, and the first order cubic anisotropy constants (K_1) were calculated. The temperature variation of K_1 and effects of $\text{Y}^{3+}/\text{Lu}^{3+}$ substitution are explained.

References

PRINCIPAL
Goethanjali College of Engg. Techno.
Cheerayal (V), Keesara (M), R.R. Dist. (A.P.) - 501 301

16-17
①

The Employer's Expectations from an Engineering Graduate

Dr. S. Madhumathi, G C E T, Hyderabad (mkotamraju@yahoo.co.in)

Abstract

English has become the language of employability. Communication and conversational skills in this language paves a comfortable path towards employability. In addition to acquisition of employment, a high degree of adaptability of soft skills can sustain the position of a fresh engineering graduate at work place. Employers today prefer to hire young and energetic engineers who have the potentiality of becoming future team leaders to take sensible resourcefulness and exhibit dynamism.

Key Words: Communication and Soft Skills, Corporate Atmosphere, Employability, Industry Interaction

Introduction

In the Indian context, an engineering student's success at the on-campus recruitment is mainly based on their demonstration of communication skills. According to NASSCOM (National Association of Software and Services Company) president Karnik³, only 25 percent of technical graduates are suitable for employment in the outsourcing industry because of their lacking abilities to speak or write well in English. (Karnik, 2007 as cited in P'Rayan 2008:1). Most students are not 'industry ready' because they lack communication skills. (Infosys, 2008).

Out of the total 600+ Engineering existing colleges in the state, only around 20 and above engineering colleges in both the Telugu States in India have a good placement record. Most of the final year undergraduate Students of these colleges are recruited by reputed IT and core-engineering companies. In some of these colleges more than 90 per cent of the students are placed and recruiters attribute the success of the students to their ability to communicate well and think clearly. The on-campus recruitment process consists of three or four stages: 1) Aptitude test, 2) Technical interview, 3) Group discussion, and 4) HR interview. During the four stages the candidates' technical knowledge, analytical, verbal reasoning, critical thinking, communication, soft skills, and group skills are assessed and at each stage the unsuccessful

A new facile and efficient synthesis of 2-((5-aryl-1,3,4-oxadiazol-2-yl)methoxy)-3-methyl quinoxaline and 3-methylquinoxalin-2-yl-2-(5-aryl-2H-tetrazol-2-yl)acetate derivatives

Shashikala Kethireddy¹, Hemalatha Kotakommula²,
Laxminarayana Eppakayala³ and Thirumala Chary Mariganti^{2,*}

¹Geethanjali College of Engineering and Technology, Keesara, Rangareddy, 501301, Telangana, India

²Jawaharlan Nehru Technological University Hyderabad, Kukatpally, Hyderabad, 500085, Telangana, India

³Sreenidhi Institute of Science and Technology, Ghatkesar, Hyderabad, 501301, Telangana, India

Corresponding author at: Jawaharlan Nehru Technological University Hyderabad, Kukatpally, Hyderabad, 500085, Telangana, India.

Tel.: +919848511562. Fax: +919848511562. E-mail address: mtchary@yahoo.com (T.C. Mariganti).

ARTICLE INFORMATION



DOI: 10.5155/eurjchem.8.2.125-129.1553

Received: 11 February 2017
Received in revised form: 19 March 2017
Accepted: 19 March 2017
Published online: 30 June 2017
Printed: 30 June 2017

KEYWORDS

Tetrazole
Quinoxalines
Antiviral activity
1,3,4-Oxadiazole
Antibacterial activity
Anticonvulsant activity

ABSTRACT

Newly synthesized compounds containing quinoxaline ring fused with tetrazoles and oxadiazoles show array of pharmacological activities, especially, anti-inflammatory, analgesic and anticonvulsant activities. The ability to serve as surrogates or bioisosteres for carboxylic acids, esters and carboxamides made them important moieties in drug designing. Considering the importance of quinoxalines, tetrazoles and 1,3,4-oxadiazoles to both medicinal and heterocyclic chemistry, the following 2-((5-aryl-1,3,4-oxadiazol-2-yl)methoxy)-3-methyl quinoxaline and 3-methylquinoxalin-2-yl-2-(5-aryl-2H-tetrazol-2-yl)acetate derivatives are synthesized. The structures of the synthesized compounds were confirmed by ¹H NMR, ¹³C NMR and Mass spectral data. All the synthesized derivatives were tested *in vitro* for their antibacterial activity.

Cite this: *Eur. J. Chem.* 2017, 8(2), 125-129

1. Introduction

Tetrazoles are heterocyclic, five-membered rings containing four nitrogens and one carbon atom (C₄H₄) [1]. Presence of four nitrogen atoms makes them acidic. They undergo electrophilic as well as nucleophilic substitution [2]. They can act as pharmacophore for the carboxylate group, which increases their utility. Tetrazoles are Angiotensin II blockers as in Losartan and Candesartan [1,3,4]. Tetrazoles and its derivatives show most promising biological activities like antibacterial, antiviral, antifungal, anticonvulsant, anticancer, hypoglycemic, antinociceptive and ulcerogenicity index [5-16]. They are cyclooxygenase inhibitors and therefore exhibit analgesic, anti-inflammatory activities [4,17].

It was observed that several highly mutagenic and carcinogenic quinoxalines have been found in heated meat and fried fish. Some of the quinoxaline derivatives have been identified as mild hypo glycaemic agents and used for treating pain, epilepsy and other neurodegenerative disorders. Due to

DNA binding properties of quinoxalines, they show highest activity against the herpes virus.

They are part of well-known antibiotics such as levomycin, echinomycin, and actinoleutin that are known to inhibit growth of gram positive bacteria. Quinoxalines show various biological activities such as anti-viral, anti-depressant and as kinase inhibitors. They are active against transplantable tumors.

Fusion of tetrazole with quinoxalines is considered as planar acidic heterocyclic analogue of carboxylic function, which has the ability to increase potency and enhance bioavailability [18,19].

1,3,4-Oxadiazole is a neutral aromatic molecule which is thermally stable [20]. Quinoxalines containing 1,3,4-oxadiazole have been shown to possess a broad biological activity spectrum including antibacterial, antifungal, antiviral, anticancer, antihypertensive, anticonvulsant and anti-diabetic properties [20,21].

Peristaltic Transport of a Couple-Stress Fluid with Nanoparticles in an Inclined Tube

K. Maruthi Prasad¹, N. Subadra², U. S. Mahabaleshwar³

¹Department of Mathematics, School of Technology, GITAM University, Hyderabad 502329, Telangana, India

²Department of Mathematics, Geethanjali College of Engg. and Tech., Cheeryal (V), Keesara (M), R. R. Dist. 501301, Telangana, India

³Department of Mathematics, Government First Grade for Women, Hassan, 573201, Karnataka, India

Abstract: The paper deals with a theoretical investigation of the peristaltic transport of a couple-stress fluid with heat and mass transfer effects. The velocity, pressure drop, time averaged flux, frictional force, mechanical efficiency, temperature profile, nano particle phenomena, heat transfer coefficient and mass transfer coefficient of the fluid are investigated, when the Reynolds number is small and wave length is large by using appropriate analytical methods. Effects of different physical parameters like couple-stress fluid parameters, Brownian motion parameter, thermophoresis parameter, local temperature Grashof number as well as local nano particle Grashof number on pressure drop characteristics, frictional force, heat transfer coefficient, mass transfer coefficient and stream line patterns of the fluid are studied. The expressions for velocity, temperature profile, nano particle phenomenon, heat transfer coefficient and mass transfer coefficients are sketched through graphs. The streamlines are drawn to discuss trapping phenomenon for some physical quantities.

Keywords: Peristalsis, Couple-stress fluid, Brownian motion parameter, Thermophoresis parameter, Mechanical Efficiency, Heat transfer coefficient, Mass transfer coefficient.

1. Introduction

Peristaltic pumping is a word used to describe a progressive wave of contraction along a tube whose cross-sectional area consequently changes. Peristalsis is an inherent property of many tubular organs of the human body. The mechanism of peristaltic transport has been exploited for industrial applications like sanitary fluid transport, blood pumps in the heart lung machine, transport of corrosive fluids. In view of its importance, a number of researchers investigated peristaltic transport of Newtonian and non-Newtonian fluids under different conditions (Fung & Yih, (1968), Shapiro et al. (1969), Griffiths, (1989), Srinivasacharya et al. (2003), Prasad, Radhakrishnamacharya, & Murthy, (2010), Ellahi et al. (2014), Prasad et al. (2015)).

Couple-stress fluid model has been widely used by researchers because of its relative mathematical simplicity compared with other models. Blood, lubricants containing small amount of high polymer additives, electro-rheological fluids and synthetic fluids show the effect of couple-stress and rotation of

molecules, which are not present in the case of Newtonian fluids. Hence couple-stress fluid serves as a better model for these fluids. Couple-stress fluids was developed by Stokes, (1966). Pal et al. (1988) studied and developed a couple stress model of blood flow in the microcirculation. Effect of peripheral layer on peristaltic transport of a couple-stress fluid was investigated by Prasad & Radhakrishnamacharya, (2009). Maiti & Misra, (2012) studied peristaltic transport of a couple stress fluid: some applications to hemodynamics. Hydromagnetic effect on inclined peristaltic flow of a couple stress fluid was developed by Shit & Roy, (2014).

Nanotechnology has immense contribution in industry since materials of nanometer dimensions exhibit incomparable physical and chemical characteristics. Water, ethylene glycol and oil are common examples of base fluids used for the nanofluid phenomena. Nanofluids have their enormous applications in heat transfer, such as microelectronics, fuel cells, pharmaceutical processes and hybrid powered engines. They explore enhanced thermal conductivity. A large amount of literature is available which deals with the study of nanofluid and its applications. S. U.S. Choi, (1995) was the pioneer to study the nanofluids. Pool boiling of nano-fluids on horizontal narrow tubes was studied by Das et al. (2003). Noreen, (2013) investigated mixed convection peristaltic flow of third order nanofluid with an induced magnetic field. Study of peristaltic motion of nanoparticles of a micropolar fluid with heat and mass transfer effect in an inclined tube was done by Prasad et al. (2015).

It is known that many ducts in physiological system are not horizontal but have some inclination with the axis. Slip effects on peristaltic transport of power-law fluid through an inclined tube was investigated by Naby & Shamy, (2007). Maruthi Prasad & Radhakrishnamacharya, (2008) studied flow of Herschel-Bulkley fluid through an inclined tube of non-uniform cross-section with multiple stenoses. Shit & Roy, (2014) discussed Hydromagnetic effect on inclined peristaltic flow of a couple-stress fluid. Peristaltic transport of a nanofluid in an inclined tube was investigated by Prasad et al. (2015).

Keeping all the above in view, peristaltic transport of a couple-stress fluid with nanoparticles in an inclined tube has been investigated under the

“A COMPARATIVE STUDY ON PERFORMANCE OF SELF HELP GROUPS IN INDIA”

K. Naupal Reddy

M.com, MBA, (CS) Asst. Professor
Department of Management Studies

Geethanjali college of Engineering & Technology, Cheeryal Village,
Keesara Mandal, Medchal District., Hyderabad, Telangana 50130.

Abstract: This paper reveals the progress of SHG bank linkage programme at the national and regional level and examines its impact on economic conditions of SHG member households. The programme has grown at a tremendous pace during last two decades and emerged as the most prominent means of delivering micro finance services in INDIA. Through the regional spread of the programme is highly skewed with highest concentration in the southern region, it has started picking up pace in other regions. The average annual net incomes, assets and savings of SHG members household increased significantly in the post SHG situation. The average amount of loans and the regularity in repayment of loans increased and the dependence on moneylenders decreased remarkably. The percentage of loans used for productive purposes and employments per household increased, the incidence of poverty among SHG members declined and the social empowerment of women improved significantly. The study offers important policy suggestions.

Key Terms: About four key words Self help group, empowerment, micro finance to women, and membership.

1. INTRODUCTION

A self-help group (SHG) is a village-based financial intermediary committee usually composed of 10–20 local women or men. A mixed group is generally not preferred. Most self-help groups are located in India, though SHGs can be found in other countries, especially in South Asia and Southeast Asia.

Members make small regular savings contributions over a few months until there is enough capital in the group to begin lending. Funds may then be lent back to the members or to others in the village for any purpose. In India, many SHGs are 'linked' to banks for the delivery of micro-credit.

A self-help group may be registered or unregistered. It typically comprises a group of micro entrepreneurs having homogeneous social and economic backgrounds, all voluntarily coming together to save regular small sums of money, mutually agreeing to contribute to a common fund and to meet their emergency needs on the basis of mutual help. They pool their resources to become financially stable, taking loans from the money collected by that group and by making everybody in that group self-employed. The group members use collective wisdom and peer pressure to ensure proper end-use of credit and timely repayment. This system eliminates the need for collateral and is closely related to that of solidarity lending, widely used by micro finance institutions. To make the bookkeeping simple, flat interest rates are used for most loan calculations. Self-help groups are started by non-governmental organizations (NGOs) that generally have broad anti-poverty agendas. Self-help groups are seen as instruments for goals including empowering women, developing leadership abilities among poor people, increasing school enrollments, and improving nutrition and the use of birth control. Financial intermediation is generally seen more as an entry point to these other goals, rather than as a primary objective. This can hinder their development as sources of village capital, as well as their efforts to aggregate locally controlled pools of capital through federation, as was historically accomplished by credit unions.

2. IMPORTANCE OF THE STUDY:

- Self-help groups minimize the bank's transaction costs and generate an attractive volume of deposits.
- An economically poor individual gains strength as part of a group.
- While lenders have to handle only a single SHG account instead of a large number of small-sized individual accounts, borrowers as part of an SHG cut down expenses on travel.
- Self help groups helps u to know about Initiation of savings and credit activities.
- Promotion of income generating programs in these self-help groups will bring more economic development and independence to the women and their families.