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31	Mr. Fasi Ahmed Farvez	Application of Gravitational Search Alogorithm	-	ICICA-16	International		ISSN: 0974-5572	International Science Press
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34	Mr. B. Ranjith Ms. Asiya	Trust based sub trantiation scheme over wireless sensor Networks	-	NCEITCS-2017	National		ISSN: 2231-5381	IJETT

35	Mr. Mekala Sandya Mr. Ashish Ladda	Clustering Data Streams Based on Shared Demisty - Between Micro-Clusters		Current Research Advances in Computer Science (CRACS-17)	National		ISBN Number 9789352301836	Kakatiya University, Warangal
36	Mrs.B.Sridevi	Secured Anti Collusion Data Sharing Scheme for Dynamic groups in the Cloud	National Conference On Current Research Advances In Computer Science.	Current research advances in computer science(CRACS-17)	National	2016-17	ISBN Number 9789352301836	Kakatiya University, Warangal

Number of books and chapters in edited volumes / books published							
3.3.5 Number of books and chapters in edited volumes / books published, and papers in national/international conference-roceedings per teacher							
Sl. No.	Name of the Teacher	Title of the book/chapters published	Title of the Paper	National / International	Year of Publication	Number of the proceeding	Name of the publisher
1	Dr.V.Narayana	Numerical Heat Transfer and Fluid Flow: Select Proceedings of NHTFF 2018	Bottom heated mixed convective flow in lid driven cubical cavities	International		ISSBN 978-981-13-1902-0	Springers
2	Asiya Sulthana, and Md Zia Ur Rahman,	Adaptive Artifact Elimination in ECG signals for Telecardiology systems", 'Adaptive Filtering: Principles, Concepts and Applications PAGE NUMBER NUMBER 592		International	2018-19	ISBN: 978-1-53614-783-4	Nova Science Publishers Inc., USA
3	Dr. V.Balaji	Design of Electrical Machines		National			Sams Publishers
4	Dr.K.Srinivas	A comprehensive study on Internet of Things				ISBN 9780359523771	Lulu publications

5	Dr.T.C.Manjunth	Fast Track to Robotics		National	2016-17		Nandu Printers & Publishers,
6	Dr S Manikandan	A novel approach to adaptive noise cancellation for speech signal by using wavelet based Grazing Estimation of Signal method		National		ISBN:978-93-86258-57-1	VSRD Academic Publication
7	Dr S Manikandan	Basic Electrical and Electronics Engineering		National		ISBN:978-93-80757-49-0	Sri Maruthi Publishers
8	Dr.T.C.Manjunth	Modeling, Control and Implementation of Smart Structures : A FEM - State Space Approach		National		3-540-48393-4	Research Monograph in Springer Verlag


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Earthquake Resistant Low-Rise Open Ground Storey Framed Building By Pushover Analysis

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Abstract: -- Presence of infill walls in the frames alters the behaviour of the building under lateral loads. However, it is common industry practice to ignore the stiffness of infill wall for analysis of the framed building. Engineers believe that analysis without considering infill stiffness leads to a conservative design. But this may not be always true, especially for vertically irregular buildings with discontinuous infill walls. Hence, the modeling of infill walls in the seismic analysis of framed buildings is imperative. Indian Standard IS 1893: 2002 allows analysis of open ground storey buildings without considering infill stiffness but with a multiplication factor 2.5 in compensation for the stiffness discontinuity. As per the code, the columns and beams of the open ground storey are to be designed for 2.5 times the storey shears and moments calculated under seismic loads of bare frames (i.e., without considering the infill stiffness). However, as experienced by the engineers at design offices, the multiplication factor of 2.5 is not realistic for low rise buildings. This calls for an assessment and review of the code recommended multiplication factor for low rise open ground storey buildings.

Index Terms - Infill walls, Open ground storey, Equivalent static analysis, response spectrum analysis, pushover analysis, low rise building.

1. INTRODUCTION

Due to increasing population since the past few years car parking space for residential apartments in populated cities is a matter of major concern. Hence the trend has been to utilize the ground storey of the building itself for parking. These types of buildings having no infill masonry walls in ground storey, but infilled in all upper storeys, are called Open Ground Storey (OGS) buildings. They are also known as 'open first storey building'. The OGS framed building behaves differently as compared to a bare framed building (without any infill) or a fully infilled framed building under lateral load. A bare frame is much less stiff than a fully infilled frame; it resists the applied lateral load through frame action and shows well-distributed plastic hinges at failure.

1.1 NEED FOR THE PRESENT STUDY

As experienced by the engineers at design offices the multiplication factor of 2.5 given by IS 1893:2002, for ground storey beams and columns, is not realistic for low rise buildings. This calls for a critical assessment and review of the code recommended multiplication factor. Assessment of the multiplication factor (MF) requires accurate analysis of OGS buildings considering infill stiffness and strength. The presence of infill walls in upper storey's of OGS buildings accounts for the following issues:

Increases the lateral stiffness of the building frame.
Decreases the natural period of vibration. Increases the base shear. Increases the shear forces and bending moments in the ground storey columns.

1.2 SCOPE OF THE STUDY

Open ground storey (OGS) buildings are commonly constructed in populated countries like India since they provide much needed parking space in an urban environment. Failures observed in past earthquakes show that the collapse of such buildings is predominantly due to the formation of soft-storey mechanism in the ground storey columns.

1.3 REVIEW OF LITERATURE

A state of the art literature review is carried out as part of the present study. This chapter presents a brief summary of the literature review. The literature review is divided into two parts. The first part deals with the seismic behaviour of the open ground storey buildings whereas the second part of this chapter discusses about the previous work carried out on the linear and nonlinear modelling of infill walls.

Karisiddappa (1986) and *Rahman (1988)* examined the effect of openings and their location on the behaviour of single storey RC frames with brick infill walls.

Choubey and Sinha (1994) investigated the effect of various parameters such as separation of infill wall from frame, plastic deformation, stiffness and energy dissipation of infilled frames under cyclic loading.

Deodhar and Patel (1998) pointed out that even though the brick masonry in infilled frame are intended to be non-structural, they can have considerable influence on the lateral response of the building.

Davis and Menon (2004) concluded that the presence of masonry infill panels modifies the structural force distribution significantly in an OGS building.

Framework for Faction of Data in Social Network Using Link Based Mining Process

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Abstract

Recent online social networks such as Twitter, Facebook, and LinkedIn have hurriedly grown in reputation. The resulting accessibility of a social network data supplies an unparalleled occasion for data analysis and mining researchers to resolve useful and semantic information in a broad range of fields such as social sciences, marketing, management, and security. Still, unprocessed social network data are enormous, noisy, scattered, and susceptible in nature, in which some challenges is faced when applying data mining tools and analyzing tasks in storage, efficiency, accuracy, etc. In addition to that there are many problems related to the data collection and data conversion steps in social network data preparation. We focused on the endeavor for privacy preserving social network conversion which provides method for better protection and identification of privacy for social network users and to maintain the convenience of social network data.

Keywords

Social network Social network analysis Link mining Learning model

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A Review on Efficient Approaches to Detect and Eliminate Data Redundancy in Large Volume of Data using Anomaly detection

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Abstract : In order to finding an un-matching pattern in any dataset that does not satisfy the expected nature of the customer then Anomaly detection will these kinds of issues and Anomaly detection also finds the inconsistent data pattern, and this process is called as novelty detection, noise mining, and anomaly mining. Modern IT companies enable enterprises to detect strange events automatically in streaming data. Un-matching pattern refers error in the dataset, different pattern, duplicate data and misbehavior data. Identifying anomalies is more important in a wide range of disciplines like economic data, medical analysis, share market, insurance data and identity fraud, network malicious and programming defects. There are various types of anomalies available such as point or content anomalies, context anomalies, and collective anomalies. Some of the data are abnormal than the other entire dataset regarding meta-information is called as context anomalies. The collected data points are considered as anomalies when compared to other data in the data sheet.

Keywords: Data Mining, data preprocessing, Big data, MOMGODB, QAmodel

I. INTRODUCTION:

In general, anomaly detection can be obtained by three types of algorithms such as unsupervised, supervised and semi-supervised algorithms. These algorithms utilize labeling the trained data and compare with the test data. To separate normal and abnormal data, labeling and comparing are used. This classification of training data leads to analyze the new entry test data while streaming. Various issues to be challenged with standard anomaly detection methods due to the fields like spatial, sequential or temporal data associated with the sources from where the data are generated. In recent days anomaly detection is used mainly for prevalent Big data especially sensor data. Sensor data are recorded remotely using various sources such as electrical outlets, weblogs, water pipes, telecommunications and many other areas.

Compared with a template of large amounts of data which is input very frequently. Anomaly detection is also a kind of intrusion detection method. Digital media and its contents are increasing tremendously that creates a challenging problem for data administrators. Shaping and organizing data from various resources to the data repositories are based on the schema and structure of the data. This arrangement can be made by some set of software agents installed in the digital libraries. If the size of the data increases then it is hard to manage the entire dataset and problems occur regarding response time, availability, security and quality assurance. To improve the peculiarity mining, the dirty data (i.e. replicas, errors and unique patterns) from the repositories should be removed.

Data Mining

Data mining has become one of the most promising and progressive fields for the manipulation and extraction of data to produce useful information. Every day most of the businesses are using data mining applications to extract, manipulate, and identify valuable information from the records stored in their databases, data warehouses, and data repositories. Process optimization, human factors, shop scheduling, and quality management are some of the areas in which data mining tools are used such as decision trees, genetic algorithms, data visualization, and neural networks can be implemented with great results.

Anomaly

Identifying abnormal data points, data items, events which cannot imitate to the predictable design of a given data group. These are some of the anomalies which are created not frequently, but it is a significant threat like fraud or cyber intrusions. Anomaly detection is applied in behavioral analysis and another format of examination to aid in learning about location, detection, identification and predicting of anomalies in the large set of data. It is also called as anomaly detection or outlier detection.

1.1 Anomaly Detection

One of the most important processes used as the main process in data mining is anomaly detection. It is used to determine the kind of anomalies exists in a given dataset with the details of their creation. Fraud detection, fault detection, intrusion detection, event detection, health care monitoring kinds of domains needs anomaly detection. Mostly in sensor networks, anomaly detection is used widely. Anomalies are unexpected abnormal activities occur whereas it is detected by fetching the abnormalities of the data, data behavior, and other rare abnormal activities. Anomaly detection is most important since it destroys the quality of data and data mining process. Anomaly detection is a problem of finding errors, different patterns, duplication, and misbehavior. One of the major research problem based on applications is anomaly detection. Various non-conforming patterns, aberrations, peculiarities or exceptions in various application domains are often referred to as anomalies. From these, the duplicate records, error, misbehavior based data are treated as anomalies. Anomaly detection is mostly used in online applications such as banking, credit card fraud, insurance, and healthcare.

A Review on Emerging Virtualized Environment DOCKER

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Abstract – Now a days in software developing environment, virtualization is the technology is playing a vital role in virtualization of hardware infrastructure through a layer know as hypervisor which is actually deals the within the same machine, virtualization is done by isolating host operating system and other guest operating systems. To solve this problem container based technology is introduced known as Docker, which helps the developers and sys-admins to build and run distributed applications. Docker is an open platform. Docker virtualizes host operating system through Docker engine allows container to be created by the images stored in Docker hub. Docker container provides an environment for executing the application. Applications running in Docker container are isolated from the application running in other container. Docker technology that virtualizes host operating system, provided by Docker engine, a portable, light weight runtime allows containers running in a isolated manner on same machine. The application running in container has been allowed to push back to Docker hub as Docker Image. Docker hub which is a cloud based service that enables sharing of application and automating workflows. Eventually, Docker removes all dependency issues, enables applications to be quickly assembled from Docker components and eliminates the friction between development, quality assurance and production environment.

Index terms: Container, Cloud, Docker, Docker Daemon, Docker Images, Virtual Machine

I. INTRODUCTION

Docker is a cloud based open platform for building, shipping and running distributed applications. It is used run software packages called containers. Containers are isolated from each other and bundle their own applications, tools, libraries and configuration files they can communicate each other by well-defined channels all these are run through a single operating systems and or thus more low weight than virtual machines. It gives programmers, development teams and operation engineers the common tool box they need to use of the distributed and networked nature of real world applications. Docker containers wrap up a piece of software in a complete file-system which contains everything; it needs to run code, run- time, system tools and system libraries – anything you can install on the server. This guarantee that it will always run the same, regardless of the environment it is running in [1].

Docker Containers are:

- i) **Low weight:** Dockers Containers running on a single machine all share the same operating system i.e. kernel. So, Dockers start instantly and make more efficient use of RAM. Images or files are constructed from layered file-systems. So, they can share common files, making disk usage and image downloads are more efficient.
- ii) **Open:** Docker containers are based on open standards allowing containers to run on all major Linux and Microsoft operating systems with support of every infrastructure.
- iii) **Secure:** Containers isolate and unique applications from each other and the underlying infrastructure, and also it provide an added layer of protection for the application.

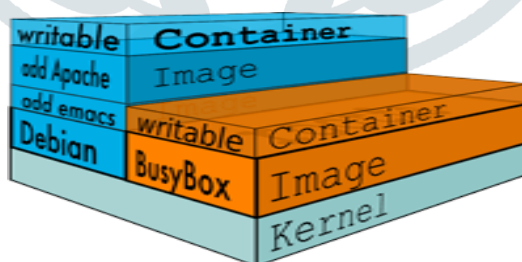


Figure. 1: Docker Container

II. LITERATURE SURVEY

Each and every virtual machine [6] includes the application, the necessary binaries, libraries and entire guest Operating systems - all of which may be 10GBs in size. Containers contain an application and all of its dependencies, but share the kernel (Operating System) with other containers. They run as an isolated or unique process in user space on the client Operating System. They are not tied to any specific infrastructure. Docker containers [1] run on any computer, on any infrastructure and in any cloud [5].



A Review: Map Reduce Framework for Cloud Computing

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Abstract:

In this generation of Internet, information and data are growing continuously. Even though various Internet services and applications. The amount of information is increasing rapidly. Hundred billions even trillions of web indexes exist. Such large data brings people a mass of information and more difficulty discovering useful knowledge in these huge amounts of data at the same time. Cloud computing can provide infrastructure for large data. Cloud computing has two significant characteristics of distributed computing i.e. scalability, high availability. The scalability can seamlessly extend to large-scale clusters. Availability says that cloud computing can bear node errors. Node failures will not affect the program to run correctly. Cloud computing with data mining does significant data processing through high-performance machine. Mass data storage and distributed computing provide a new method for mass data mining and become an effective solution to the distributed storage and efficient computing in data mining.

Keywords: Data Mining, Cloud, Map Reduce Framework, HDFS (Hadoop Distributed File System), Parallel Programming, Distributed Databases

1 Introduction:

Data Mining is the approach of accessing the exact data i.e. required data from large amount of database. Where the user can get

this information with in very short time. So many Data mining software's came into the market which can be performed on complex calculations and can be analyzed on set of data in very short time. Data mining aims at knowledge analysis, discovering frequent patterns, and sequential patterns, unknown & hidden patterns from multiple data streams. Data mining utilizes tools, procedures, algorithms and methodologies to taking out from large data. Data mining tools are used for predictive modeling, presenting information in required format such as graph or table and efficient handling of complex and relational data. Data mining allows finding information hidden in the data that is not always apparent, given that, given the gigantic volume of existing data; a large part of that volume will never be analyzed.

Cloud computing is an area or place where you can store large amount of data. In today's generation cloud computing is most merging technology where user can access the data from anywhere, any place, at any time. It also provides a most important feature to the user i.e. "As You Pay as You Get" i.e. how much the user is using the storage that much only they need to pay for it. Cloud computing deals with the resources of infrastructure for massive and complex data, software distribution for users to subscribe the software and platform for users are able to use prebuilt environment to run a new application. The main objective of cloud computing is

to access resources & services needed to perform tasks efficiently. Essentially, cloud computing is a multi-user, multi-tasking, concurrently supported system. Efficient, simple and fast is its core philosophy.

Map Reduce model delegates the data-intensive computations to a cluster of remote servers, through a distributed file system, will distribute the workload, optimizing time and resources. It facilitates a parallel development pattern to simplify the implementation of applications in distributed environments. The original intention of the distributed parallel programming model was to make more efficient use of hardware and software resources to enable users to use applications or services faster and easier. In distributed parallel programming mode, complex background tasks and resource scheduling are transparent to the user.

Hadoop Distributed File System (HDFS) In the current field of cloud computing, the open source system HDFS developed by Google's GFS and Hadoop are the two popular cloud computing distributed storage systems. Most ICT vendors, including Yahoo, Intel's "cloud" plan are used HDFS data storage technology. Future developments will focus on very large data storage, data encryption and security guarantees, and continued improvements in I / O rates.

GFS (Google File System) Technology: GFS meet the needs of a large number of users, in parallel to provide services for a large number of users. Making cloud computing data storage technology with high throughput and high transmission rate characteristics.

Parallel Computing is a mechanism where two or more process can be executed concurrently on different processors at the same time. In order to handle this overall control/coordination mechanism is employed. The parallel computing will increase the performance of



Anonymous and Traceable Group Data Sharing in Cloud Computing

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Abstract:

A new CP-ABE methodology for an information sharing system by exploit the attribute of the system preparation. The projected methodology options the subsequent achievements: 1) the key written agreement drawback may well be solve by escrow-free key supplying protocol, that is construct victimization the secure two-party computation between the key creating centre and therefore the data-storing centre, and 2) fine-grained user revocation per every attribute may well be done by proxy coding that takes advantage of the fastidious quality cluster key sharing on high of the ABE. The presentation and security analyses purpose to it the projected theme is capable to firmly manage info unfold within the data allocation system. During this paper, we tend to propose a secure multi owner knowledge sharing theme, named Mona, for dynamic teams within the cloud. By investment cluster signature and dynamic broadcast coding techniques, any cloud user will anonymously share knowledge with others. Meanwhile, the storage overhead and coding totaling price of our theme square measure autonomous with the quantity of revoked users. Additionally, we tend to analyze the security of our theme with rigorous proofs, and show the potency of our theme in experiment

Index Terms – Cloud computing, Encryption, Cipher text

I. INTRODUCTION

Cloud computing is primarily based development and use of technology ("computing"). It's a method of computing during which dynamically scalable and sometimes virtualization resources square measure provided as a service over the net. One amongst the foremost basic services offered by cloud suppliers is knowledge storage. Allow us to contemplate a sensible knowledge application. a company permits its staffs within the same cluster or department to store and share files within the cloud. However, it additionally poses a major risk to the confidentiality of these keep files. Specifically, the cloud servers managed by cloud suppliers don't seem to be absolutely trusty by users whereas the information files keep within the cloud is also sensitive and confidential, like business plans. To preserve knowledge privacy, a basic answer is to encode knowledge files, then transfer the encrypted knowledge into the cloud. First, identity privacy is one amongst the foremost important obstacles for the wide readying of cloud computing. While not the guarantee of identity privacy, users is also unwilling to affix in cloud computing systems as a result of their real identities might be simply disclosed to cloud suppliers and attackers. On the opposite hand, unqualified identity privacy could incur the abuse of privacy. For instance, a misbehaved workers will deceive others within the company by sharing false files while not being traceable. Therefore, traceability, that permits the cluster manager (e.g., a corporation manager) to reveal the \$64000 identity of a user, is additionally extremely fascinating. Second, it's extremely counseled that any member in an exceedingly cluster ought to be ready to absolutely get pleasure from the information storing and sharing services provided by the cloud, that is outlined because the multiple-owner manner. Compared with the single-owner manner [1], wherever solely the cluster manager will store and modify knowledge within the cloud, the multiple-owner manner is a lot of versatile in sensible applications. a lot of concretely, Last however not least, teams square measure unremarkably dynamic in apply, e.g., new employees participation and current worker revocation in an exceedingly company. The modifications of association create secure knowledge sharing extraordinarily troublesome. On one hand, the anonymous system challenges new granted users to find out the content of information files keep before their participation, as a result of its not possible for brand new granted users to contact with anonymous knowledge house owners, and acquire the corresponding decoding keys. On the opposite hand, AN economical membership revocation mechanism while not change the key keys of the remaining users is additionally desired to attenuate the quality of key management. Many security schemes for knowledge sharing AN untrusted server are planned. In these approaches, knowledge house owners store the encrypted knowledge files in untrusted storage and distribute the corresponding decoding keys solely to licensed users. Thus, unauthorized users additionally as storage servers cannot learn the content of the information files as a result of them need no information of the decoding keys. To unravel the challenges conferred higher than, we tend to propose a secure multi-owner knowledge sharing theme for dynamic cluster within the cloud. the most contribution of this paper include: to produce security for dynamic cluster we tend to integrates Image based authentication and just one occasion countersign to attain high level of security the most Objective of Image based authentication is providing a 3 levels of security. it's a novel and an cabalistic study of victimization pictures as countersign and implementation of an especially secured system, using three levels of security. Level one Level one security provides a straightforward text primarily based countersign. Level two during this security level the user must choose a picture from the grid of pictures. It will eliminate the shoulder attack and also the tempest attack. Level three when the victorious entry of the higher than 2 levels, the extent three Security System can then generate a one-time numeric countersign that might be valid only for that login session. The authentic user are wise of this just one occasion countersign on his e-mail.

II. LITERATURE SURVEY

Literature survey is that the most significant step in computer code development method. Following is that the literature survey of some existing technique for cloud. A. Plutus: scalable Secure File Sharing on Untrusted Storage. M. Kallahalla et al. [2] projected cryptanalytic storage system that is thought as Plutus. Plutus permits secure file sharing on untrusted server by victimization shopper primarily based key distribution. Plutus enable shopper to handle all the key management and distribution operations. As compare to shopper, Server incurs little or no cryptanalytic overhead as a result of Plutus doesn't place abundant trust on server, it eliminates the majority demand of server trust. Plutus divide files into file teams and modify knowledge owner to share the file teams with others by encrypting every file cluster with distinctive file-block key which will shield knowledge. There ar some limitation known within the Plutus like a) a significant key distribution

Avoidance of Fire Accidents on Running Buses by using IoT Smart System

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Abstract:

At present days the accidents that occurring with fire has become most problematic in transport vehicles. Which is leading to large disaster to human life's so in order to reduce these fire accidents a new methodology must be emerged which must be sensed by a device which is connected to proper gps system with internet. The main objective of our system is to find the fire accidents and inform to nearby fire authorities that is been linked with transport, the process which we proposed in this is that a sensor that detect the fire crash and accidents while we are moving in the buses or any other transport ...etc, A module that has been connected to a module through longitude and latitude with sensor alarms. At last the data has been has discharged through the sensor to the available nearby fire departments or stations which follows a archetype.

Keywords: fire accidents, internet of things (IoT), node MCC, Gps, Buzzer

1. INTRODUCTION:

Our country places second position in population emerging it's been increasing further .so the main mode of transportation here is by buses or some other vehicles are used for transportation. As government and private sectors are been included in transportation but the secure to the life of people is been provided in the government sectors that may be concern to the accidents or fire accidents that may occur while traveling, in concern to the fire accidents so the fire extinguishers are placed in vehicles to rescue the human lives.

Every people read the news daily, and the news is about fire accidents. Recently in Warangal lorry and Fuel tank hit with each other two people burnt alive in 2019 January. Such kind of accidents happens it is huge loss to the family and government also. Like India in many other countries also fire accidents are happens frequently. Occurs in AC Buses because it is closed completely, and passengers require more time to rescue their lives. So our intention is to prevention is better than cure. to avoid fire attracts in buses we advise and design a system Using IOT.



Figure 1: Buses caught in fire



Figure: School bus catches fire

In our days news forwarded easily by the internet. Where we can able to find the solutions by using internet.

IOT uses absolutely connected devices and the systems to control the information collected by a embedded sensors. When fire attacks occurs the machines will mechanically communicates with help of network, so we can avoid the human lives loss and government property loss. So, prevention can be done for the loss of humans and as well as property. In our paper we are going to propose a device which mechanically observes to avoid human misfortune too property misfortune.

The system consists of Node MCU module, which bond GPS module, fore sensors and water sprinklers and alarm module. The information from these sensors force to set in motion the node MCU which thus actuates the, alert framework, water sprinkler framework, and GPS[3] module it will consequently shares area to cloud.

Correlated Matrix Factorization for Recommendation with Implicit Feedback

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Abstract: *The implicit feedback primarily recommendation problem once solely the user history is offered however there aren't any ratings—is a far tougher task than the express feedback based recommendation problem, thanks to the inherent uncertainty of the interpretation of such user feedbacks. Recently, implicit feedback drawback is being received additional attention, as application oriented analysis gets additional engaging at intervals the sphere. This paper focuses on a typical matrix factorisation methodology for the implicit drawback and investigates if recommendation performance is improved by applicable data format of the feature vectors before coaching. we tend to gift a general data format framework that preserves the similarity between entities (users/items) once making the initial feature vectors, wherever similarity is outlined mistreatment e.g. context or data. We tend to demonstrate however the planned data format framework is in addition to radio frequency algorithms. We tend to experiment with numerous similarity functions, totally different context and data primarily based similarity ideas. The analysis is performed on 2 implicit variants of the MovieLens 10M dataset and 4 world implicit databases. We tend to show that the data format considerably improves the performance of the radio frequency algorithms by most ranking measures.*

Key Words: *Recommender systems, implicit feedback, Initialization, Similarity, Contextual information.*

I. INTRODUCTION

Recommender systems became an essential technique for filtering and recommending info or things to modify to users' preferences or desires, like product recommendation at Amazon and motion picture recommendation at Netflix or music recommendation at mythical being or perhaps illness prediction systems. Numerous approaches supported matrix factoring (MF) are planned to unravel the matter of ratings prediction and build recommendations by solely mistreatment user-item ratings info. To enhance the advice performance, recent works use the discernible express social relationships (e.g., trust links among on-line users) to boost radio frequency framework and build social recommender systems. Besides, implicit correlations info (e.g., top-k similar neighbours) iatrogenic by similarity mensuration based mostly approaches is used to enhance radio frequency and build the supposed implicit social recommender systems. Social recommender systems build usage of the trustable social relationships among users to deal with the scantiness issue of ratings knowledge, and so improve the user preference prediction by considering not solely a users' rating behaviour, however additionally the tastes of a user's trustable social neighbours. As an example, in [12], a user social regularization term is integrated into the target operate of radio frequency to assist form the users' latent area. However, the use of the specific user-user social connections suffers from 2 main weaknesses: (a) there's no obtainable indication concerning reliable social relationship in most real-life systems like Netflix or Ebay or (even there is) the specific relationship indication is typically terribly thin (e.g., the trust density in Epinions is zero.03%), so most of the social recommendation algorithms cannot be applied to real systems; (b) an energetic user may be connected with others WHO have totally different taste/preference [18] so social relationship fails to write in code the great correlation between the varied tastes of 2 users toward different varieties of things. As for the implicit social recommender systems, they infer and incorporate implicit correlations info into radio frequency supported the specific rating feedbacks. for example, in [18], Associate in Nursinging implicit network embedding technique CUNE is planned to reckon similarities among users and generate top-k similar neighbours of every user and any incorporate them into radio frequency. though enhancing radio frequency with inferred correlations, current implicit social recommendation approaches have 2 main limitations: (a) the rating-based similarity measurements (e.g., Pearson correlation coefficient) area unit straightforward to search out direct neighbours nonetheless give no correlation info for non-neighbouring nodes on user-item ratings bipartite network; (b) the ways (e.g., CUNE) generating top-k implicit neighbours ignore correlations between a user and their non-top-k neighbours which can still contain some potential helpful info, so they fail to explore implicit info comprehensively. To resolve the higher than problems relating to each express and implicit social recommender systems, we have a tendency to propose to extract multiple implicit and reliable correlations among users and things by solely mistreatment ratings info. Specifically, we have a tendency to manage users' positive feedbacks (relatively giant ratings) on things as a user-item implicit bipartite network (U-I-Net) and utilize stochastic process sampling on U-I-Net to get aset of node sequences. every stochastic process sequence implies multiple direct/indirect correlations among users and things among the walk. Next, we have a tendency to style a joint model ImWalkMF of radio frequency and implicit walk integrative learning (IWIL) supported the collected stochastic process set. The radio frequency element of ImWalkMF formalizes users' direct rating feedbacks on things by mistreatment commonplace sq. loss. Besides, the IWIL element of ImWalkMF formalizes multiple direct/indirect correlations among users and things from each user and item levels by introducing a user-user (item-item) pull loss operate and a user-item (item-user) push loss operate. soImWalkMF comprehensively models each direct rating feedbacks and helpful implicit info. so as to unravel the challenge of coaching ImWalkMF product of 2 freelance elements mistreatment totally different knowledge samples, we have a tendency to propose a combined strategy supported sampling to coach the joint model and optimize the latent factors of users and things. any evaluated experiments verify the effectiveness of ImWalkMF in recommendation. In summary, our main contributions area unit as follows:

- we have a tendency to innovatively introduce stochastic process sampling to gather a collection of node sequences supported user-item implicit bipartite network that means multiple implicit and reliable correlations. not like previous work that specialise in computing similarities and inferring restricted implicit relationship among users (items), it captures comprehensive info to enrich user-item ratings knowledge.
- supported the set of stochastic process sequences, we have a tendency to propose a joint recommendation model ImWalkMF for modelling each rating feedbacks and multiple implicit correlations among users and things, and any style a combined strategy for coaching ImWalkMF supported sampling.
- We have a tendency to conduct in depth experiments to judge the performance of ImWalkMF. The results show that ImWalkMF mostly improves the normal regularized/probabilistic matrix factoring models, and outperforms the competitive baselines that utilize explicit/implicit social info.

Framework design on Bridge Monitor system with IOT Sensor

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Abstract:-

Now-a-days most of the bridges cross the world build rivers and oceans, which are subjected to maintain it for the life time but at a certain time it is going to expired. Though it is dangerous but they are still in use. Due to rapid occurrence of cyclonic conditions or heavy vehicle loads these bridges may collapsed where the water level is increased and leads to destruction. This may harm the users. So, these bridges required a special care without manual network. So these bridges require a weight sensor, water level point sensor and WIFI module. This system protects from heavy loads ,water level and pressure. If any issue takes place then it generates the signals (alarm) through buzzer with IOT device and auto barriers which is connected to the serve. The achievements have brought a real time monitors systems by using IOT.

Index terms: Wi-Fi Module, IOT, Monitoring Centre

I. INTRODUCTION

Now a day it is very essential to monitor, the bridges [1] in our country or state as there were incidences happen earlier. The reason behind the these incidents as there is no such type of system, which will give information to the peoples if the bridge is not in good condition when sudden situations may occurs like flood, earthquake [2]. It means that the bridge is not in safe condition. When such situation arises, bridge [3] may be collapse, which causes much kind of losses like accidents, human deaths, etc. This happens because there is no efficient system in existence, which will provide notification about conditions about current condition of bridge [4] when bridge is not in safe mode. In the existing systems, Zig-Bee technology [5] was used which is cost consuming and quite time consuming, but this system used the TCP/IP protocol which is suited for all types of bridges.

Therefore in this study, the IOT wireless sensor network [6] and smart building technologies are adopted to solve the various problems of bridge safety information transmission and management by developing an IOT based bridge [7] safety monitoring system capable of monitoring the environmental data of a bridge and transmitting [8] the data to the mobile devices of bridge safety management staff through the router based IOT connection for reference and documentation.

The water level sensor [9] is used through which system has to check manually the level of water. So for this the system is being developed with an real time application[10] in which everything is automated so less human work are required and this application is very much useful For future generations suited for all types of bridges in the emergency condition like prevent from flood, earthquakes. The system developed in this study can help to promote the advancements of bridge safety management [11]. This system aims at developing an application that is useful for the people working at the bridge department or for bridge engineers [12]. The main objectives of the Bridge Monitoring System are:

- To provide safety for bridges.
- To avoid accidents in case of heavy rainfall.
- To improve the bridge efficiency.
- To overcome the technical and cost obstacles.

II.SYSTEM ARCHITECTURE:

This system consists of following parts:

1. **Wi-Fi Module** - Through Wi-Fi module the status of the overall bridge will be sent to the monitoring system.
2. **Vibration sensor** – Vibration sensor senses the condition of bridge, whether it is in better condition or not.
3. **Water level Transmitter sensor** – It is used to sense the water level status.
4. **Barriers with servo motor** – If water level increased or the bridge becomes vibrate then barriers with servo motor will close.
5. **Management Centre** – All the necessary information related to status of the bridge is send to and monitor by Management centre.

As shown in the Figure 1 the communication between bridge and monitoring Centre is takes place via WI-FI module. The WI-FI module itself act as sever through which status of condition of bridge is transmitted to the monitoring Centre. The Monitoring devices like water level transmitter and vibration sensor are continuously monitoring the structural health of bridge. If water level increased and if bridge is being vibrated then barriers with servomotor will close and at the same time, status of bridge condition is directed to the monitoring Centre.

Secure Data Sharing and Searching at the Edge of Cloud -Assisted Using Least Processing Cost First Technique in Internet of Things

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ABSTRACT:

The Internet of Things (IoT) is considered as a future web that broadens the association of the web to a wide range of certifiable physical shrewd gadgets. A report by Cisco gauges that by 2020 around 50 billion of such brilliant gadgets will be associated with the Internet. By interfacing these billions of shrewd gadgets to the Internet, the IoT will give created keen and independent digital physical situations in the zone of brilliant lattices, savvy urban areas, savvy homes, keen therapeutic and social insurance frameworks, wearable advances, transportation frameworks, and so forth. In any case, the lion's share of these gadgets are a piece of an extensive stage, consequently, an enormous measure of information are created that requires high computational capacities for capacity, preparing, and examining purposes in a safe and efficient way. By and large, the savvy gadgets have constrained assets. Then again, cloud assets have for all intents and purposes boundless capacity and preparing abilities with adaptability and on-request openness anyplace. Therefore with the assistance of the cloud, the IoT shrewd gadgets can assuage the weight of constrained assets. For IoT applications, shrewd gadgets require low inactivity, high information rate, quick information access, and continuous information investigation/preparing with basic leadership and portability bolster. Because of a few downsides, the cloud can't fulfill the previously mentioned necessities.

Keywords: Edge-Fog Cloud, ISP Domain, Shrewd Gadgets, Savvy Gadgets, Cyber Physical Cloud Computing Systems (CPCCS), Least Processing Cost First (LPCF)

I. INTRODUCTION

The Internet of Things (IoT) is considered as a future web that broadens the association of the web to a wide range of certifiable physical shrewd gadgets. A report by Cisco gauges that by 2020 around 50 billion of such brilliant gadgets will be associated with the Internet. By interfacing these billions of shrewd gadgets to the Internet, the IoT will give created keen and independent digital physical situations in the zone of brilliant lattices, savvy urban areas, savvy homes, keen therapeutic and social insurance frameworks, wearable advances, transportation frameworks, and so forth. In any case, the lion's share of these gadgets are a piece of an extensive stage, consequently, an enormous measure of information are created that requires high computational capacities for capacity, preparing, and examining purposes in a safe and efficient way. By and large, the savvy gadgets have constrained assets. Then again, cloud assets have for all intents and purposes boundless capacity and preparing abilities with adaptability and on-request openness anyplace. Therefore with the assistance of the cloud, the IoT shrewd gadgets can assuage the weight of constrained assets. For IoT applications, shrewd gadgets require low inactivity, high information rate, quick information access, and continuous information investigation/preparing with basic leadership and portability bolster. Because of a few downsides, the cloud can't fulfill the previously mentioned necessities. In any case, edge registering adds numerous advantages to cloud-helped IoT and backings previously mentioned prerequisites by keeping information handling, interchanges, and capacity task anxious servers that are near the gadgets at the edge of the systems. Additionally, because of savvy gadgets' restricted scope of network, the edge servers can fill in as middle people for correspondences over long separations. These edge servers are any close to home gadget or cell phone, remain solitary servers, or system gadgets that are facilitated inside one jump a long way from the end gadgets. Furthermore, the edge servers likewise coordinate and associate emphatically with cloud servers. With the expanding number and accessibility of shrewd gadgets, information sharing is offered inside cloud assisted IoT applications. The information are of little utilize if the shrewd gadgets don't impart information to different gadgets. Information sharing at the edge enables keen gadgets to impart information to bring down dormancy and have quick information get to and higher data transmission. The cutting edge remote interchanges innovation (5G) will enormously rely upon such arrangements where gigantic IoT savvy gadgets are interconnected with high information rates at ultralow inertness. Yi et al. assess an execution examination of the cloud and edge/mist server regarding inertness and bandwidth. The results demonstrate that when utilizing haze and cloud server, the latencies are 1.416 and 17.989 ms, individually, and the uplink/downlink transmission capacity for mist and cloud are 83.723/101.918 and 1.785/1.746 Mbps, separately. At the point when the IoT keen gadgets share information with different gadgets, potential security issues emerge, for example, information spillage, modification, respectability, and unapproved get to. Thus, it is fundamental that such shared information be guaranteed Confidentiality, uprightness, and access control while sharing at the edge. Moreover, a safe information seeking system is expected to look and recover the mutual information by approved gadgets. At display, there is couple of answers for address the difficulties of secure information sharing and looking in mists. Regularly, to guarantee confidentiality of shared information, symmetric key, public key, and homomorphism encryption-based system are as of now utilized. Access control strategies in light of access control rundown and dynamic trait are utilized for get to control purposes. Accessible encryptions in light of symmetric and open keys are utilized for looking through the coveted information. In every one of these plans, for information security, significant security-arranged preparing, for example, encryption, unscrambling, and get to control instruments are taken care of by the client's gadget itself. In IoT, the asset constrained brilliant gadgets can't deal with this calculation concentrated tasks in light of the fact that the security-situated activities will expand the substantial computational weight.

In this paper, by considering the previously mentioned confinements of current answers for resource limited brilliant gadgets, we propose a lightweight cryptographic plan so IoT keen gadgets can impart information to others at the edge of cloud-helped IoT wherein all security-situated tasks are offloaded to close-by edge servers. Besides, albeit at first we center around information sharing security, we additionally propose an information looking plan to seek wanted information/shared information by approved clients on capacity where all information are in scrambled shape. At long last, security and execution investigation demonstrates that our proposed plot is efficient and diminishes the calculation and correspondence overhead of all substances that are utilized in our plan.

Secure Mining of Association Rules In Equally Distributed Databases

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Abstract - Data processing is that the most quickly developing vary these days that is employed to separate imperative learning from data accumulations but oftentimes these accumulations are isolated among a number of gatherings. Affiliation govern mining is one amongst the ways in data processing. Here, we tend to propose a convention for mining of affiliation principles in on grade plane condemned databases associated convention depends on the quick Distributed Mining (FDM) calculation that is an unsecured sent variant of the Apriori calculation. the first fixings in convention ar 2 novel secure multi-party calculations — one that processes the union of personal subsets that every of the associating players hold, and another that tests the thought of a element control by one player in a very set control by another. Our convention offers upgraded protection regarding the convention. Also, it's less complicated and is essentially additional productive as way as correspondence rounds, correspondence value and process value.

IndexTerms -Apriori Algorithm, Association Rule, Distributed Database, FDM, secure multi-party algorithms

I. Introduction:

Data mining will extract necessary data from giant information collections however generally these collections are split among varied parties. Data processing is outlined because the methodology for extracting hidden prophetic data from giant distributed databases. it's new technology that has emerged as a way of characteristic patterns and trends from giant quantities of knowledge. The ultimate product of this method being the data, which means the many data provided by the unknown parts. Here we tend to study the matter of mining of association rules in horizontally partitioned off databases. There are many sites that hold uniform databases, i.e., databases that share constant schema however hold data on completely different entities [1]. With given stripped-down support and confidence levels that hold within the unified info the goal is to search out all association rules, whereas minimizing the knowledge disclosed concerning the non- public databases control by those players. That goal defines a tangle of secure multi-party computation. the knowledge that will wish to defend during this planned work, not solely people group action however additionally additional world data like association rules that ar supported domestically in every of those info .In such issues, there ar M players that hold non-public inputs, x_1, \dots, x_M , and that they want to firmly calculate $y = f(x_1, \dots, x_M)$ for a few public operate f . If there existed a sure third party, the players might surrender to him their inputs and he would perform the operate analysis and send to them the ensuing output. it's required to plot a protocol that within the absence of such a sure third party the players will run on their own so as to gain the desired output y [1]. Then such a devised protocol is taken into account if no player will learn from his read of the protocol quite what he would have learnt within the perfect setting wherever the computation is distributed by a sure third party.

In planned system is, the inputs are the partial databases, and also the needed output is that the list of association rules with given support and confidence. Because the on top of mentioned generic solutions rely on an outline of the operate f as a Boolean circuit, they'll be applied solely to little inputs and functions that are realizable by straightforward circuits. in additional complicated settings, alternative strategies ar needed for winding up this computation. In such cases, some relaxations of the notion of good security can be inevitable once trying to find sensible protocols, as long as the surplus data is deemed benign.

Kantarcioglu and Clifton studied that drawback wherever additional appropriate security definitions that permit parties to settle on their desired level of security are required, to permit effective solutions that maintain the required security and devised a protocol for its solution [2]. The most a part of the protocol could be a sub-protocol for the secure computation of the union of personal subsets that are control by the various players. That's the foremost pricey a part of the protocol and its implementation depends upon crypto-graphic primitives like independent coding, oblivious transfer, and hash functions. This can be additionally the sole half within the protocol within which the players might extract from their read of the protocol data on alternative databases, on the far side what's understood by the ultimate output and their own input. Whereas such outpouring of knowledge renders the protocol not utterly secure, the perimeter of the surplus data is expressly finite in and it's argued that such data outpouring is innocuous, wherefrom acceptable from sensible purpose of read.

In this we tend to propose an alternate protocol for the secure computation of the union of personal subsets. The planned protocol improves upon that in terms of simplicity and potency still as privacy. Specifically, protocol doesn't rely upon science primitive i.e. independent coding and oblivious transfer. Whereas the answer continues to be not utterly secure, it leaks excess data solely to atiny low variety of coalitions (three), not like the protocol of that discloses data additionally to some single players.

Design of Image Editor & Edge Detector in Matlab GUI Environment

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 Dept. of Electronics & Communication Engg, Balaji Institute of Technology & Science

Abstract: - Digital Image Processing techniques can enhance or distort an image, highlight certain features of an image create a new image from portions of other images, restore an image that has been degraded during or after the image acquisition. This paper envisages the implementation of basic features of Image Processing like viewing the red, green and blue components of a colour image separately, converting image to gray, black & white, negative; image addition & joining, comparison, crop, resize, increase/decrease brightness, rotate and edge detection using different algorithms etc. Also, it deals with accessing Webcam and getting a snapshot of it to process.

Keywords: - Image Processing, MATLAB, GUI, Edge Detection.

I. INTRODUCTION

Digital Image Processing is a subset of the electronic domain wherein the image is converted to an array of small integers, called pixels, representing a physical quantity such as scene radiance, stored in a digital memory, and processed by computer. MATLAB based image processing is a very suitable platform and very simple to build an algorithm. An image is a matrix of pixel values. MATLAB considers every input as a matrix. For this reason MATLAB provides an easy tool for image Processing as a user can easily access each and every pixel value from the image matrices and edit it. Generally users deal with three types of images, hence three different matrices. Black and white or binary image matrix consists of only zero and one, one being the brighter portion and zero being the darker portion. Images are of 8bit and corresponding image matrix is 256 x 256. Gray scale image is also a 2 dimensional matrix with each element value varying from 0 to 256. Similar to gray scale image RGB image can also be denoted by matrix with each pixel values varying from 0 to 256. In case of RGB image, three separate matrices for each red, green and blue components overlap to form a RGB image of 256x256x3 dimension.

II IMAGE EDITOR

The image editor is prepared by the Graphical User Interface (GUI) option existing in MATLAB . The editor consists of three axis and the following options:

- Image input using web camera

- Browse image
- Image addition
- Image joining
- Image comparison
- Black & White Conversion
- Gray Conversion
- Image Negative
- Brightness adjustment
- Image Rotate with user input
- Image Cropping with user input
- Slider to adjust Image Brightness
- Image Resize with user input
- Image Reset to Original
- Panel to view RGB format and each component separately
- Clearing all axes
- Edge detection

While creating the GUI, push button, slider, radio button, pop-up menu, panel and button group options available in MATLAB are used, (Figure. 2) Now each component is discussed separately.

Panels - In this 5 panels are created. First panel is to load the image from either browser or from webcam. Second panel is to take second image from browser or webcam. In this panel image addition, joining and comparison options are included. Third panel has editing options like gray image, black & white, image negative, brightness control using slider, resize, crop, rotate, clear, reset to original etc. Fourth panel is to have Original RGB format and individual primary colours separately. Fifth panel is to give different edge detection methods.

Phone Parking System with Privacy-Preserving

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Abstract: - Most urban areas around the globe expect drivers to pay for the time they involve a parking space. Along these lines, drivers are urged to abbreviate stopping time so different drivers are given a sensible shot of discovering stopping. The conventional route, in light of moving to a compensation station and setting the issued stopping ticket on the dashboard of the auto, shows a few disadvantages like predicting ahead of time the length of stopping or the need to move to the auto on the off chance that the stopping time must be expanded. In the course of the most recent couple of years, a few applications allowing to pay through the cell phone have showed up. Such applications oversee point by point data about stopping tasks with the goal that exact profiles of stopping propensities for auto proprietors can be made. In this paper we propose a framework to pay for stopping by telephone which saves the protection of drivers as in the data oversaw by the framework is demonstrated not to help an aggressor with full access to it to improve the situation that she would do by watching the city for gathering data about stopped autos.

Keywords: - Cryptography, Pay-by-telephone stopping, Privacy.

I. INTRODUCTION

The measure of vehicles in urban areas is developing each day while it is not really difficult to expand the sum of on-road stopping inlets. Confining the most extreme time a vehicle can involve a parking space is required to energize a normal turnover of stopping coves and give drivers a sensible possibility of discovering stopping. An exact observing can as it were be done by introducing in-ground sensors that send a warning to a stopping officer when an auto surpasses the stopping time confine. In-ground sensors have been introduced in a few urban areas like Melbourne, Westminster or San Francisco. These frameworks are costly to introduce and keep up. In San Francisco, upkeep of a solitary parking spot is past \$20 every month [5]. A less expensive arrangement is executed by expecting drivers to pay for the time they possess a stopping sound. Subsequent to stopping her auto, a driver moves to the nearest pay station and makes a installment. Some stopping machines give Mastercard offices as an extra choice to coins. From that point onward, the machine issues a stopping ticket that must be put on the dashboard of the auto. Stopping authorization officers watch stopping zones furthermore, screen for infringement which will be rebuffed. Time confinements are incorporated by restricting the stopping term in a stopping ticket. Along these lines of restricting stopping time isn't exact since a ticket which is going to lapse can just be supplanted with another one. By and by, paying for stopping time urges most drivers to move their autos when conceivable.

These frameworks show a few disadvantages:

- Drivers must guarantee to have adequate coins preceding stopping (if Visas are not bolstered).
- Drivers need to foresee (and pay for) the term of stopping ahead of time. On the off chance that stopping takes less time than anticipated, the cash relating to unused time is lost. On the off chance that stopping time must be broadened, the driver is required to move to the auto.
- Moving to the compensation station and returning to the auto to put the stopping ticket requires some serious energy.

Numerous towns and urban communities give the likelihood to pay to stopping by telephone [8], [12]– [16], [19], [21]. A driver introduces an application in her cell phone and makes a record in which she demonstrates a hotspot for subsidizing, for example, a charge card number. After stopping, the driver sign in her record, demonstrates her auto tag number, the territory of the city she has stopped in, and the normal length. From that point forward, an installment for the comparing sum is performed. Some of these applications allow to intrude on a stopping session so that the cash comparing to unused time is discounted. Likewise, a driver can expand stopping time without the need to move to her auto. Stopping officers are given a cell phone where they can type an auto tag number and check whether a installment for that auto is in actuality. In such a framework, a framework server that gathers data of all the stopping tasks is required with the goal that stopping officers can inquiry it. Information gave to pay-for-stopping applications offer

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Single Phase Clock Distribution Using Low power and Multiband Pre-scaler

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Abstract: - Regularly the clock circulation system will devour around 70% of the aggregate power devoured by the IC since this is the main flag which has the most elevated action. Fundamentally for a multi-clock area organize we build up a various PLL to cook the need, yet it devours more power. Thus, the fundamental point of this task is building up a low power single clock multiband arrange which will supply for the multi-clock space organize. It is very valuable and prescribed for correspondence applications like Bluetooth, Zigbee, and WLAN. It is demonstrated utilizing Verilog mimicked utilizing Modalism and actualized in Xilinx.

Keywords: - Prescaler, PLL, Programmable Counter, Swallow Counter, MOD, sel, clk, MC.

I. INTRODUCTION

Division task is critical in the PC framework. For division calculation prior they utilized Phased Lock circle (PLL), yet now daily's we are utilizing equipment module divider. There are such huge numbers of systems to execute the divider. In synchronous procedure it generally require clock flag to trigger the framework. In the event that we utilize this system we may cause a few issues like clock skew, dynamic power utilization and so forth. Be that as it may, in nonconcurrent circuits no need of framework clock flags so it doesn't have the deficiencies specified previously. The interest for bring down cost, bring down power, and multiband RF circuits expanded in conjunction with need of more elevated amount of joining. The coordinated synthesizers for WLAN applications at 5 GHz devour up to 25 mW in CMOS acknowledge yet it expends expansive chip territory and has a limited bolting range. To conquer this we utilized the best distributed recurrence synthesizer at 5 GHz however it devours control around 9.7 mW. Keeping in mind the end goal to beat this we utilized dynamic hooks, which are quicker and devour less power contrasted with static divider. The TSPC and E-TSPC outlines can drive the dynamic hook with a solitary clock stage and maintain a strategic distance from the

skew issues. Be that as it may, E-TSPC prescaler will devour 6.25 mW. To defeat this we utilized a low power wideband 2/3 prescaler and wideband multimodulus 32/33/47/48 prescaler which can devour control up to

158.43 mw. Recurrence dividers are likewise called prescaler which are utilized as a part of numerous correspondence applications like recurrence synthesizer, timing-recuperation circuits and clock age circuits. A prescaler is stacked at the input way of the synthesizer, takes flag and produces an occasional yield flag and recurrence. It is a standout amongst the most basic squares in recurrence synthesizer since it works at most astounding recurrence and devours huge power. So there must be control diminishment in the principal phase of prescaler which will lessen the aggregate power utilization. So low power wideband 4/5 prescaler and a wideband multimodulus 64/65/79/80 prescaler is utilized as a part of this task.

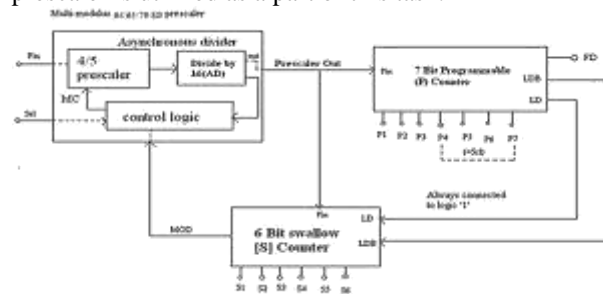


Fig.1. proposed dynamic logic multiband flexible Divider.

In this paper, a Dynamic rationale multiband adaptable whole number – n divider in light of heartbeat swallow topology is proposed which utilizes a low power wideband 4/5 prescaler and a wideband multimodulus 64/65/79/80 prescaler as appeared in Fig.1, the divider likewise utilizes an enhanced low power loadable piece cell for the Swallow S-counter.

Data Encoding Techniques for Reducing Energy Consumption in Network-On-Chip

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Abstract: - In this paper, we display an arrangement of information encoding plans went for diminishing the power disseminated by the connections of a NoC. As innovation recoils, the power disseminated by the connections of a system-on-chip (NoC) begins to contend with the power dispersed by alternate components of the correspondence subsystem to be specific the switches and the system interfaces (NIs). The proposed plans are general and straightforward regarding the hidden NoC texture (i.e., their application does not require any adjustment of the switches and connection design). Examinations completed on both engineered and genuine movement situations demonstrate the adequacy of the proposed plans, which permit setting aside to 51% of energy scattering and 14% of vitality utilization with no huge execution corruption and with under 15% territory overhead in the system interface. The EDA instrument utilized as a part of the paper is Software apparatuses i.e. Modalism 10.0c (Simulation), Xilinx ISE 14.4 (Synthesis) and dialects utilized for yields is Verilog-HDL.

Keywords: - Coupling Switching Activity, Data Encoding, Interconnection on Chip, Low Power, Network-On-Chip (Noc), Power Analysis.

I. INTRODUCTION

As per Moore's law thickness of transistors pairs like clockwork and presently we as a whole realize that there are a huge number of FETs on a solitary chip is known as VLSI. Coordinating these FETs consolidate together to perform set of tasks and applications, for example, DSP, Communications, Robotics and therapeutic documented. System on chip is a correspondence subsystem an on incorporated circuit runs of the mill between IP centers in a framework on a chip (SOC). NOC Technology connected strategies to on chip correspondence and brings eminent change over customary transport and crossbar interconnections. NOC enhances the adaptability of SOC's and the power effectiveness of complex SOC's contrasted with different outlines. A system on chip utilizes parcels to exchange information between IP center interfaces inside a chip. The NOC construct framework with respect to chips forces different outline issues on the manufacture of such coordinated chips. Right off the bat, the reasonable topology for the objective NOCs with the end goal that the introduction supplies and outline imperatives are fulfilled Secondly, the plan of system interfaces to get to the on chip system and switches give the physical interconnection components to transport information between preparing centers. At long last, as innovation scales and exchanging speed builds, future system on chips will turn out to be

more responsive and inclined to mistakes and blames. On-chip correspondence issues are more significant to contrast with the computational important issues. The computational subsystem has real targets like including cost, execution, control dissemination, vitality utilization; dependability in this manner, the aggregate energy of a framework on chip relies upon the correspondence subsystem. In this work, we are going to decreasing the power dissemination in the system joins. The power dispersal in the system on chip is pertinent to the power dissemination in the switches and Network Interfaces (NIs). For exceptionally incorporated electronic frameworks, the decrease of on-chip control dissemination is a fundamental one. The measure of energy utilization in a NOC develops straightly by expanding the measure of bit advances in subsequent information bundles sent through the interconnect design. By utilizing the coding plans we are diminishing the exchanging movement on the two wires and rationale thusly we are lessening the power utilization in the NOC. The power because of self-exchanging action of individual transport lines while overlooking the power dispersal inferable from their coupling exchanging movement. Information encoding is essentially utilized for decreasing the quantity of bit progress over interconnects. Transport rearrange (BI), Adaptive coding, Gray coding and Transition strategy these are the different encoding methods utilized as a part of the NOC. We are utilizing the information encoding with dim

Feasibility studies on Fibrous Self Curing Concrete Using Polypropylene Fibre

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Abstract: -- Today Water is the most required substance in the era. In common, Curing of concrete is maintaining moisture in the concrete during early ages specifically within 28 days of placing concrete, to develop desired properties. Proper curing of concrete is essential to obtain maximum durability, especially if the concrete is exposed to serve conditions where the surface will be subjected to excessive wear, aggressive solutions and severe environmental conditions. Poor curing practices adversely affect the desirable properties of concrete which make a major impact on the permeability of a given concrete. Unexpected shrinkage and temperature cracks can reduce the strength, durability and serviceability of the concrete. The surface zone will be seriously weakened by increased permeability due to poor curing. The development of concrete shrinkage is proportional to the rate of moisture loss in concrete. When concrete is properly cured, water retained in concrete would help continuous hydration and development of enough tensile strength to resist contraction stresses. The continuous development of strength reduces shrinkage and initial cracks or micro-cracks. As a part of this investigation of Fibrous Self Curing Concrete, proportion and addition of Polypropylene Fibre resulted in the formation of microcracks in order to reduce the autogenous shrinkage and improvement of durability.

Keywords— Water scarcity; Autogenous shrinkage; Temperature cracks; Internal curing; Polyethylene Glycol; Polypropylene Fibre.

I. INTRODUCTION

This Concrete is a blend of Cement, Aggregates and water with or without appropriate admixtures. To achieve alluring quality and different properties, curing is fundamental. Curing is the way toward keeping up the correct dampness substance to advance ideal bond hydration instantly after arrangement. Proper moisture conditions are critical because water is necessary for the hydration of cementations materials.

As a result, adequate curing is essential for concrete to obtain advanced structural and durability properties and therefore is one of the most important requirements for optimum concrete performance in any environment or application. Curing techniques and Curing durability significantly affect curing efficiency.

As per IS 456: 2000, Curing is the process of preventing the loss of moisture from the concrete whilst maintaining a satisfactory temperature regime.

II. REVIEW OF LITERATURE

Álvaro Paul and Mauricio Lopez, (2011),[1] internal curing (IC), which has been extensively investigated in the last decade, has been shown to enhance hydration, diminish

autogenous shrinkage, and mitigate early-age cracking due to self-desiccation in high-performance concrete. It also increases the internal porosity of concrete, however, which might reduce mechanical properties.

Ambily and Rajamane, (2009),[2] studied the different aspects of achieving optimum cure of concrete without the need for applying external curing methods excessive evaporation of water (internal or external) from fresh concrete should be avoided, otherwise, the degree of cement hydration would get lowered and thereby concrete may develop unsatisfactory properties. Curing operations should ensure that adequate amount of water is available for cement hydration to occur.

Dale P.Bentz, (2007),[7] in the twenty-first century, most high-performance concretes, and many other ordinary concretes, are now based on blended cements that contain silica fume, slag, and/or fly ash additions.

Because the chemical shrinkage accompanying the pozzolanic and hydraulic reactions of these mineral admixtures is generally much greater than that accompanying conventional Portland cement hydration, these blended cements may have an increased demand for additional curing water.

Earthquake Resistant Low-Rise Open Ground Storey Framed Building By Pushover Analysis

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Abstract: -- Presence of infill walls in the frames alters the behaviour of the building under lateral loads. However, it is common industry practice to ignore the stiffness of infill wall for analysis of the framed building. Engineers believe that analysis without considering infill stiffness leads to a conservative design. But this may not be always true, especially for vertically irregular buildings with discontinuous infill walls. Hence, the modeling of infill walls in the seismic analysis of framed buildings is imperative. Indian Standard IS 1893: 2002 allows analysis of open ground storey buildings without considering infill stiffness but with a multiplication factor 2.5 in compensation for the stiffness discontinuity. As per the code, the columns and beams of the open ground storey are to be designed for 2.5 times the storey shears and moments calculated under seismic loads of bare frames (i.e., without considering the infill stiffness). However, as experienced by the engineers at design offices, the multiplication factor of 2.5 is not realistic for low rise buildings. This calls for an assessment and review of the code recommended multiplication factor for low rise open ground storey buildings.

Index Terms - Infill walls, Open ground storey, Equivalent static analysis, response spectrum analysis, pushover analysis, low rise building.

1. INTRODUCTION

Due to increasing population since the past few years car parking space for residential apartments in populated cities is a matter of major concern. Hence the trend has been to utilize the ground storey of the building itself for parking. These types of buildings having no infill masonry walls in ground storey, but infilled in all upper storeys, are called Open Ground Storey (OGS) buildings. They are also known as 'open first storey building'. The OGS framed building behaves differently as compared to a bare framed building (without any infill) or a fully infilled framed building under lateral load. A bare frame is much less stiff than a fully infilled frame; it resists the applied lateral load through frame action and shows well-distributed plastic hinges at failure.

1.1 NEED FOR THE PRESENT STUDY

As experienced by the engineers at design offices the multiplication factor of 2.5 given by IS 1893:2002, for ground storey beams and columns, is not realistic for low rise buildings. This calls for a critical assessment and review of the code recommended multiplication factor. Assessment of the multiplication factor (MF) requires accurate analysis of OGS buildings considering infill stiffness and strength. The presence of infill walls in upper storey's of OGS buildings accounts for the following issues:

Increases the lateral stiffness of the building frame.
Decreases the natural period of vibration. Increases the base shear. Increases the shear forces and bending moments in the ground storey columns.

1.2 SCOPE OF THE STUDY

Open ground storey (OGS) buildings are commonly constructed in populated countries like India since they provide much needed parking space in an urban environment. Failures observed in past earthquakes show that the collapse of such buildings is predominantly due to the formation of soft-storey mechanism in the ground storey columns.

1.3 REVIEW OF LITERATURE

A state of the art literature review is carried out as part of the present study. This chapter presents a brief summary of the literature review. The literature review is divided into two parts. The first part deals with the seismic behaviour of the open ground storey buildings whereas the second part of this chapter discusses about the previous work carried out on the linear and nonlinear modelling of infill walls.

Karisiddappa (1986) and *Rahman (1988)* examined the effect of openings and their location on the behaviour of single storey RC frames with brick infill walls.

Choubey and Sinha (1994) investigated the effect of various parameters such as separation of infill wall from frame, plastic deformation, stiffness and energy dissipation of infilled frames under cyclic loading.

Deodhar and Patel (1998) pointed out that even though the brick masonry in infilled frame are intended to be non-structural, they can have considerable influence on the lateral response of the building.

Davis and Menon (2004) concluded that the presence of masonry infill panels modifies the structural force distribution significantly in an OGS building.

A new Design and Control of a Two-Wheel Self-Balancing Robot using the Arduino Microcontroller

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Abstract: -- In the last decade, the open source community has expanded to make it possible for people to build complex products at home. [1] In this thesis a two wheeled self-balancing robot has been designed. These types of robots can be based on the physical problem of an inverted pendulum [2]. In this paper, we can see the design, construction and control of a two-wheel self-balancing robot. This system consists of a pair of DC motor and an Arduino UNO R3 microcontroller board, make a robot which can balance itself on two wheels the platform will not remain stable itself. Our job will be to balance the platform using distance sensors and to maintain it horizontally. At first, we have decided to just balance the robot on its two wheels.

Keywords: — Robot, Arduino, AT mega 328, Control Systems, PID controller, Linear Quadratic Regulator.

I. INTRODUCTION

To make a robot which can balance itself on two wheels. There will be only one axle connecting the two wheels and a platform will be mounted on that .There will be a another platform above it. The platform will not remain stable itself. Our job will be to balance the platform using distance sensors and to maintain it horizontal. At first we have decided to just balance the robot on its two wheels. Basically, a two-wheel self-balancing robot is very similar to the inverted pendulum, and which is an important test part in control system and research education purpose; let us see, for an example [5], [6]. A Two-wheeled self-balancing vehicle commercially known as “Segway”.And also the Segway can never stay upright.Besides the development of Segway, studies of two-wheel self-balancing robots have been widely reported. For example, JOE [5] and nBot [6] are both early versions complete with inertia sensors and motor encoders and also along with on-vehicle microcontrollers. Arduino is an open prototyping platform based up on Atmega processors .And It will be a fast becoming popular platform for both education [7] and product development, with applications ranging from robotics [8], [9] to process control [10], [11] and networked control [12].In this paper, we report a student project on the basis of design, construction and control of a two-wheel self-balancing robot with Arduino software. The robot is driven by two DC motors, and is equipped with an Arduino Uno board which is based on the ATmega328 microprocessor, and also including with a single-axis gyroscope and a 2-axis accelerometer for attitude determination. In order to compensate for gyro drifts common in COTS sensors, a complementary filter is implemented [13]. For two wheel control designs are based up on the linearized equations of motion, such as a proportional-integral-differential (PID) control.

This paper is arranged as follows: The Section 2 describes the hardware and system architecture of the robot. The designs of filters, inner control loop to equilibrate the two motors, and balancing control in Section 3. Finally Section 4 represents the experimental results, followed by some conclusion in Section 5.

II. STRUCTURE OF THE TWO-WHEEL BALANCING ROBOT

In the structure of a self-balancing robot can be classified into three parts such as sensors, motor and motor control, and develop board [4], [5]. In Section II-A introduces the application and advantage of the sensors on the proposed balancing robot, and also how these sensors are employed to obtain measurements of acceleration, and distance traveled, and robot tilt angle. The Section II-B describes the motor selection and control for the balancing robot. And Section II-C discusses the reason behind choosing the Arduino develop board, and how it is deployed.

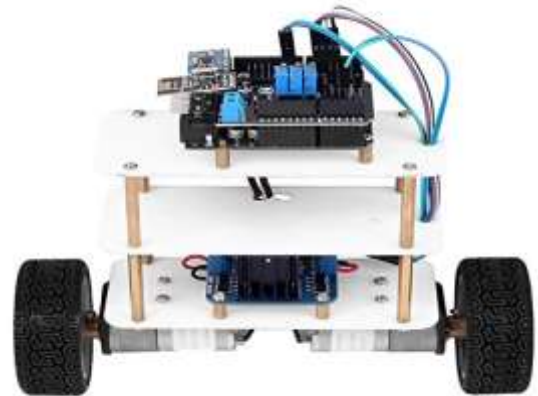


Fig 1: Self Balancing Robot

Home Automation with MATLAB and ARDUINO Interface

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Abstract: -- Home automation trade has drawn the goodish attention of researchers for quite a decade. The main plan is to mechanically management and monitor electrical and electronic home appliances. Consistent with the marketing research firm ABI regarding 4 million home automation systems were subscribed globally in 2013. An equivalent firm additionally calculable that regarding 90 million homes would use home automation system by the top of 2017, many industrial and analysis versions of the home automation system are introduced and designed. A good home system has captured many technologies. Main aim of this paper is to propose a system which demonstrates interfacing between MATLAB and Arduino board for household equipment monitoring and control. In the proposed system, Arduino board is interfaced with MATLAB using serial communication to control home appliances. Image acquisition device is interfaced to MATLAB that will continuously show the status of household equipment's on Graphical User Interface [GUI] designed in MATLAB. Proper commanding is done from MATLAB GUI, household equipment's can be turned ON or OFF which are interfaced to Arduino through relay board.

Keywords- Arduino UNO, MATLAB, Automation, Condition monitoring, Computerized Monitoring.

I. INTRODUCTION

The Home automation market is very promising field that is growing at faster rate. Lot of discussion has been carried out about home automation systems. It shows that, home automation is a technology involving centralized & autonomous control of housing, buildings and industry, including safety features against various sudden unanticipated scenarios. Home automation basically incorporates an electronic control of household activities like control of electrical appliances, lightning, central heating & air conditioning and security system. The rapid growth and application of control systems has not been confined to industrial use but also implemented in personal and private spaces of people all around the world. The idea of autonomous home has been one of the most desirable technologies in life of human beings and considerable improvements have been made in this field. The system presented in this paper shows continuous monitoring and control of home appliances with Arduino Matlab interface. Realizing the hardware potential, software suppliers Like Mathworks and National Instruments have included the Arduino package on the software accessories of MATLAB and LAB View.

II. LITERATURE SURVEY

In 21st century, various system implementations are present for home automation with wired as well as wireless communication as key element. A comparative analysis on most common and recent techniques that have been implemented in field of home automation systems along with

advantages and disadvantages of each . A novel architecture for a home automation system is presented and implemented in using Zigbee technology which lowers the expense of system and the instructiveness of respective systems. Generally advanced aged people have more needs than middle aged people. Thus efforts are made to improve home automation system by using Z-wave technology to transfer data in home network to have control over devices . A system architecture presented in provides control over networked devices which can be controlled securely via internet. An intelligent automation system using Google cloud messaging server and android operating system uses a local device to transfer a signal to home appliances, a webserver to store customer and mobile smart device running android application as the emerging technology in home automation. As Speech processing with MATLAB and android application plays very vital role to support home automation system, a system presented in uses speech processing and speech recognition to control electrical appliances. System architecture developed in consists of ATmega16 as brain of system along with different supporting hardware's like remote controller, touch screen, temperature and humidity sensor, speed regulator. As per commands forwarded by user through touch screen all home appliances can be controlled manually .the system also works with complete automotive mode by detecting presence of human beings according to given commands. Now a day's many systems are implemented which uses simple image processing algorithm designed in MATLAB and hardware control support through MATLAB-Arduino

Ethernet Based Control of Electrical Appliances with Arduino Uno Interface

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Abstract: -- This project is based on the construction of a model simulating a home automation with different operation modes which can be controlled also by Ethernet. To achieve this objective, a scale house that captures different signals, both digital and analog, has been developed. To approach the house to a real web server can be implemented in a device in your own home connected to your pc via a local area network. To capture the signals, the prototype has temperature, lighting, for the regulation and control. The core is an Arduino uno board that allows the application operation and receives, from a web server, operating modes commands and, if it is operating manually, orders to individually controls the different actuators. For the data transmission from the Arduino to the web server, is used communication via Ethernet.

Keywords: Home automation, Arduino uno, Ethernet, Web Server.

I. INTRODUCTION

The main aim of this project is to implement a Home automation console that can be easily accessible from distant places through a simple web server running inside the home. The basic functionalities in this proposed system includes automatic control of Lights and other electrical / electronic appliances. Internet-enabled hardware products are slowly becoming popular. A real web server can be implemented in a device in your own home connected to your pc via a local area network. This will allow you to do things like display temperature, control heater/geyser and switch light/fan remotely from any web browser in the house. Arduino uno based devices used at residential locations for the purpose of home automation such as TV ON/OFF control, speed control of fan, lighting control etc. Arduino uno communicate with each other via Ethernet a wired communication. Because these systems use hard-wired Ethernet, communication between components is reliable and fast.

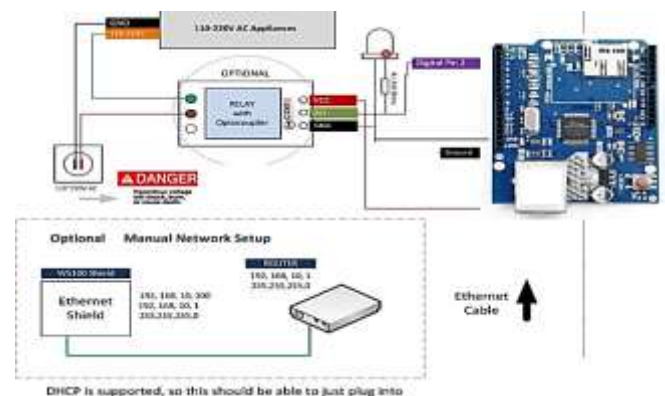
II. ARDUINO UNO BOARDS

A micro-controller is a small computer on a single integrated circuit Containing a processor core, memory, and programmable input/output peripherals The important Part for us is that a micro-controller contains the processor (which all computers have) and memory, and some input/output pins that you can control. (often called GPIO –General Purpose Input Output Pins)



The board contains everything needed to support the microcontroller; simply connect it to a computer with a micro-USB cable or power it with a AC-to-DC adapter or battery to get started. The Due is compatible with all Arduino shields that work at 3.3V and are compliant with the 1.0 Arduino pin out

III. CIRCUIT DIAGRAM



Electronic Scrolling Display Using Arduino Board

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Abstract: -- The led Display System is aimed at the colleges and universities for displaying day-to-day information continuously or at regular intervals during the working hours. Being GSM-based system, it offers flexibility to display flash news or announcements faster than the programmable system. Keyboard-based display system can also be used at other public places like schools, hospitals, railway stations, gardens etc. without affecting the surrounding environment. The led display system mainly consists of a receiver and a display toolkit which can be programmed from an Arduino IDE platform. It receives the message, through serial port and displays the desired information after necessary code conversion. It can serve as an electronic notice board and display the important notices instantaneously thus avoiding the latency. Being modular design, the led display is easy to expand and allows the user to add more display units at any time and at any location in the campus depending on the requirement of the institute.

I. INTRODUCTION

Now-a-days LED Message Scrolling Displays are becoming very popular. These displays are used in shopping malls, theatres, public transportation, traffic signs, highways signs, etc.,. The big problem with these displays is to carry a computer or special keyboard for generating and sending messages to LED moving display boards dynamically. Carrying a host computer or special keyboard every time to generate message for LED display boards is big headache and also increase cost if it go for wireless based message sending. To make the LED scrolling display more portable, a GSM mobile phone is used instead of carrying keyboard or a host computer for generating or sending messages to LED display board. A text message is typed in the GSM mobile phone and sent it by using SMS service of the mobile phone to LED moving display boards. A Arduino board is connected to the LED display hardware is used to receive the message and send it to the controller circuit of the LED display. Then the controller circuit of the LED display filters the message content in message and changes the display text in LED display dynamically. By using this arduino sketch it is possible to change the text in the LED display board from anywhere in the country. The idea implemented in this project reduces the total cost that is required in the traditional LED display boards not only it makes easier to send message to the LED display boards. The project uses a Arduino UNO board at the display side with atmel 328p micro controller to send text to drive the LED display board. Along with these a power supply unit and supporting hardware for microcontroller is used.

A dot matrix is a 2-dimensional patterned array, used to represent characters, symbols and image. Every type of modern technology uses dot matrices for display of information, including cell phones, televisions, and printers. They are used in textiles with sewing, knitting and weaving. A

seven segment display is a form of electronic display device for displaying decimal numerals that is an alternative to the complex dot matrix displays.

The roll of a dice has decided the fate of kingdoms. The dice is the oldest device known to human beings for generating random numbers from 1 to 6. In this paper, we present an electronic device using an 8x8 dot-matrix LED display to simulate the faces of a real dice. Pressing a switch generates a random number on the display. A microcontroller is used to check the status of the switch and generate a random number. The dice number is displayed on the dot-matrix LED display with the help of an LED display driver.

Dot Matrix Display:

The dot matrix LED displays can be made with individual LEDs, or a pluggable unit can be bought. By making use of the pre-made pluggable unit, production costs can be lowered. Further, this type of display can show graphics and normal text. This enables the display to be used for more than just sporting events. It can be used as a billboard and information board in shopping malls. These units can be stacked or cascaded in such a manner that a larger display can be constructed. This is usually done in multiples of eight, making use of an eight bit microcontroller, as this enables easier driving. A 40-pixel by 56-pixel size is thus the smallest size of a LED panel that can be constructed when making use of a 5-pixel by 7-pixel LED dot matrix unit as shown in figure. 1. Each of these LED dot matrix display units can display a character or symbol, hence a total of 40 characters could be displayed at any given time. These characters will, however, be too small to be seen at long distances away from a LED dot matrix billboard. Hence pixel binning will have to be used. This is the process in which adjacent LEDs are grouped together to make larger pixels. By doing this the resolution of the LED dot matrix billboard will be lowered, but the size of each character will be larger and appear brighter.

- be visible in bad weather conditions

Implementation of Arduino Based AC Voltage Controller Using Single Phase Controller Techniques

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Abstract: -- This paper introduces a high-efficiency AC voltage regulator based on an AC/AC buck converter cascaded by a transformer in series with the input voltage. The AC/AC converter uses an overlap time in the gate signals to solve the commutation problem. Non-use of any snubbed circuits and current sensors leads to lower cost, smaller size and simpler hardware. The converter generates only the compensation term which results in smaller switches and, thus, lower cost. Simulation and experimental results verify the performance of the proposed topology.

Keywords: Aurdino UNO, AC Voltage Regulator, AC Chopper, AC/AC Buck Converter, Power Electronics, Light Emitting Device.

I. INTRODUCTION

About AC regulator:

A voltage controller also called an AC voltage controller or AC regulator is an electronic module based on either thyristors, TRIACs, SCRs or IGBTs, which converts a fixed voltage, fixed frequency alternating current (AC) electrical input supply to obtain variable voltage in output delivered to a resistive load. This varied voltage output is used for dimming street lights, varying heating temperatures in homes or industry, speed control of fans and winding machines and many other applications, in a similar fashion to an autotransformer. Voltage controller modules come under the purview of power electronics. Because they are low-maintenance and very efficient, voltage controllers have largely replaced such modules as magnetic amplifiers and saturable reactors in industrial use. A regulator is designed to automatically maintain a constant voltage level. A voltage regulator may be a simple "feed-forward" design or may include negative feedback control loops. It may use an electromechanical mechanism, or electronic components. Depending on the design, it may be used to regulate one or more AC or DC voltages

II. IMPLIMENTATION SETUP COMPONENTS

A. Arduino Board:

Arduino is a tool for making computers sense and control more of the physical world than your desktop computer. It's an open-source physical computing platform based on a simple microcontroller board, and a development environment for writing software for the board. Arduino can be used to develop interactive objects, taking inputs from a variety of switches or

sensors, and controlling a variety of lights, motors, and other physical outputs. Arduino projects can be stand-alone, or communicate with software running on your computer. There are many other microcontrollers and micro-controller platforms available for physical computing. All of these tools take the messy details of microcontroller programming and wrap it up in an easy-to-use package. Arduino is also simplifies the process of working with microcontrollers, but it offers some advantage for teachers, students, and interested amateurs over other systems.



Fig Arduino board

The Arduino Uno is a microcontroller board based on the ATmega328 (datasheet). It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with an AC-to-DC adapter or battery to get started. The Uno differs from all preceding boards in that it does not use the USB-to-serial driver chip.

Remote Control of Home Appliances via Bluetooth and Android Smart Phones

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Abstract: -- With everyone being on the move in a fast paced World, technologies have been increasing rapidly. This Work is regarding a student-designed project allowing users to be able to control multiple appliances remotely from the Single mobile device. This project involves the use of Bluetooth Communication and the Arduino Uno Rev 3 Microcontrollers. The whole idea is to design an app on an Android cell phone to control home appliance remotely such as lights and fans Using AC power. Although there are commercially available products on the market that implement the control of multiple Applications with a single device, this project is a teaching Point for students to build their own communication networks, create Android phone apps, and practice electrical operation of circuits.

I. INTRODUCTION

The Enabling Technologies Laboratory Student Design Program provides Wayne State University's undergraduate engineering students with the opportunity to design and Create prototypes, custom designed devices, software and services to aid persons, especially for those with disabilities. In This paper, we shall present a student design work. With many Electronic devices adopting wireless technologies, everyday Tasks are becoming easier to perform from a single device. Turning on lights while you are at office or monitoring your Homes thermostat, for example, no longer requires you to perform them from a fixed location. These tasks can be achieved by using Bluetooth systems [1] where Bluetooth Technology is used to send data over short distance. Many Mobile devices such as cell phones and tablets have this Function already packaged with the device. This paper will present a design of using an Arduino microcontroller and an HC-05 Bluetooth module to implement remote functionality of various outputs. The outcome of this work is a system that Utilizes an Android phone app to turn on/off a fan (120V AC) And an LED strip (9V DC). The purpose of this project is to gain a better understanding on how Bluetooth communication operates, more in depth, in terms of sending and Receiving serial data between multiple devices. This project will implement design, circuitry, and programming, graphical user interface (G.U.I), and project management skills in order to construct a system that allows the user to control multiple Outputs remotely using Bluetooth technology.

- 1) Implementation of serial communication between an Arduino and a Bluetooth module,
- 2) Creation of an Android phone app that can be used to Communicate to Bluetooth module,
- 3) Construction of Arduino programs that will receive data from the Bluetooth module and perform tasks based on data on serial bus,
- 4) Test of phone app in conjunction with the Bluetooth module and Arduino, and
- 5) display of status of outputs on phone app and debugging Of software of any unwanted actions / outcomes.

II. METHODOLOGY

A. Communication of Various Hardware Boards

The first step in creating a system that utilizes Bluetooth technology is to ensure that the selected hardware boards could communicate with each other. To confirm communication among the Arduino board, Android phone, and Bluetooth module, a simple circuit was constructed to see if an LED could be turned on and off using the phone app. Fig. 1 is the wiring of the Arduino with an HC-05 module. In order to monitor the serial bus, within the Arduino IDE, the serial bus can be displayed using the command Ctrl + Shift + M. Once the serial bus is displayed, traffic over the Tx and Rx pins on the Arduino can be monitored. For this test, text strings LED: ON and LED: OFF were sent from the phone to the Bluetooth module then sent over to the Arduino. The Android phone app was created using the tools from MIT App inventor 2, which is a free online tool. Successful communication was confirmed between the phone app and Arduino. Bluetooth module HC-05 Receive Pin operates at 3.3 Volts, which is why there is a voltage Divider implemented.

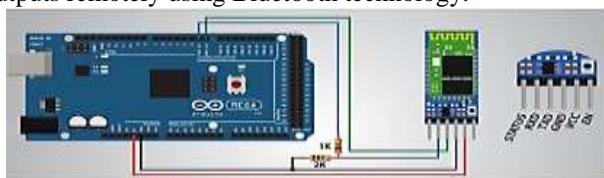


Fig. 1. Arduino board and HC-05 wiring (Courtesy of [2])

Line Follower Alphabet Using Arduino Micro Controller

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Abstract: -- This paper has been designed to build a Line following Robot using IR sensor to follow a designated path which is provided and runs over it. ROBOT has sufficient intelligence to cover the maximum area of space provided. It will move in a particular direction Specified by the user to navigate the robot through a black line marked on the white surface. Autonomous Intelligent Robots perform desired tasks in unstructured environments without continuous human guidance. The path can be visible like a black line on the white surface (or vice-versa) or it can be invisible like a magnetic field. Sensing a line and manoeuvring the robot to stay on course while, constantly correcting wrong moves using feedback mechanism forms a simple yet effective closed loop system. The base of the developed robot is Arduino UNO R3 which is a microcontroller board based on the ATmega328 (datasheet).

Keywords: Line follower, IR sensor, Robot, Arduino, ATmega328.

I. INTRODUCTION

Robot is a machine that is usually designed to reduce the amount of human work where it is applicable. It is usually developed for reducing risk factor for human work and increase comfort of any worker. Robotics has greatly advanced in the developed countries. High performance, high accuracy, lower labor cost and the ability to work in hazardous places have put robotics in an advantageous position over many other such technologies. But as for developing countries like Bangladesh it is still quite out of reach. In this paper a line tracer or follower has been presented which will trace a white line on a black surface or vice-versa [2]. We have make use of sensors to achieve this objective. The main component behind this robot is ATmega328p microcontroller which is a brain of this robot. The idea proposed in this paper is by using machine vision to guide the robot. We have made a robot that has several works to perform besides following a line [1]. It can be assured that the robot can detect three ways round obstacles while following a black line and a switch is added to make it smarter and more efficient and easier to operate. Our robot revolves around itself when it is somehow removed from the black line; and it starts following a black line on a white surface.[5] So our line follower robot is being called a line follower with several modes to operate. Other use of this robot includes entertaining when it just follows a line without going to other direction. The construction of the robot circuit is easy and small. The main component behind this robot is ATmega328p microcontroller which is a brain of this robot. The idea proposed in this paper is by using machine vision to guide the robot. The field of machine vision has growing at a fast pace. Machine vision applications can be divided into four types from a technical point of view. They can be used to locate, measure, inspect and identify. The robot proposed in

this paper is guided with the help of machine vision. The best part of our project is that if any obstacle is encountered by the robot the robot automatically stops and bluetooth module HC-06 comes into the picture and user can control the robot manually. [6]

II. BLOCK DIAGRAM

Here firstly, we chose a configuration to develop a line follower only using two infrared sensors with connection of Arduino Uno through motor driver IC. We followed a block diagram on thi regard. The block diagram illustrates the connection for the development of the line follower which follows a black line on white surface.[3][4]

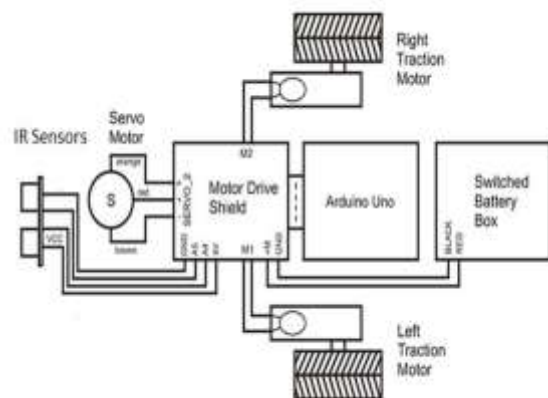


Fig.1. Block diagram of a line follower robot

After that, we have used the following block diagram for connecting three sonars with our line follower for obstacle detection purpose for our line follower.

Vibration Analysis of DC Motor with ADXL335 and MATLAB

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Abstract: -- Most of the failures in the industrial systems are due to motor faults which can be catastrophic and cause major downtimes. Hence, continuous health monitoring, precise fault detection and advance failure warning for motors are pivotal and cost-effective. The identification of motor faults requires sophisticated signal processing techniques for quick fault detection and isolation. This paper presents a real time health monitoring technique for induction motor using pattern recognition method. The proposed fault detection and isolation scheme comprises three stages: data acquisition, feature extraction and multiclass support vector machine classifier. This paper investigates single and multiple faults in single-phase induction motor including bearing fault, load fault and their combination. The test bed consists of 1/2 hp, 220V squirrel cage induction motor with load, vibration sensor, current sensor, data acquisition system and controller. Two features standard deviation and average value are computed for each sensor's data. Multiclass support vector machine classifier is implemented using a low-cost Arduino controller for fault detection and isolation. The performance analysis of the classifier with real-time sensor's data is presented which shows superior capabilities of the developed method.

Keywords: Arduino, MATLAB, ADXL335

I. INTRODUCTION

Electric motors are electro-mechanical devices used for the conversion of electrical energy into mechanical energy. Motors are integral component of almost every electromechanical system and have wide range of industrial applications. Motors might be subjected to several electrical and mechanical faults during operation. The continuity of service with high level of reliability is an important characteristic of an industrial system that requires continuous monitoring of system and its components. This encouraged many scientists and engineers to carry out research on industrial machines in an effort to enhance reliability with incorporation of fault detection and isolation (FDI) techniques. A variety of fault detection and isolation methods have been reported in the literature that encompasses techniques based on model and data driven approaches [1]–[3]. Model based methods utilize mathematical or graphical models for design of fault detection scheme such as Kalman filters and adaptive observer [4], multiple observer banks [5], and bond graphs [6]. The scope of model based fault detection and isolation methods is limited due to problem-specific design nature. Also, the performance of model based FDI methods degrades in the presence of uncertain industrial environment. On the other hand, data driven or signal based fault detection approaches are generic, independent of mathematical model that utilize process history/trends for FDI design. For instance, Bayesian, support vector machines (SVM) and neural network classifiers [4], [7], [8]. Kolla and Altman [9] presented an artificial neural network (ANN) to identify external faults and no fault condition in a three-phase

induction motor. Yuan et al. [10] presented power estimation based health monitoring and fault detection scheme. Their proposed method was based on performance degradation assessment of system components using sensor measurements and power efficiency calculations. However, the approach was problem-specific and incapable of multiple fault detection. Romero-Troncoso [11] presented FPGA based online detection of multiple faults in induction motors. A Reliable online machinery condition monitoring system is very useful to a wide array of industries to recognize an incipient machinery defect so as to prevent machinery non-fatal failure, malfunctions, or even catastrophic failures. An early fault warning can enable the establishment of a predictive maintenance program [1], which is critical to those machines (e.g., airplanes, power turbines, and chemical engineering facilities) to which an unexpected shutdown would cause serious economic or environmental consequences [2, 3]. Fault detection can be conducted based on information carriers such as the acoustic emission, vibration frequency waveform, oil analysis, temperature variation, etc. However early fault warning based on vibration signal has proven track record of preventing catastrophic failures; hence we will discuss about that in detailed manner in this paper [1]. Vibration, speed, acceleration and frequency spectrum. The measures which characterize the movement (vibration) of the system that is the displacement, speed and acceleration are defined according to the relations (1), (2) and (3):

Design and Implementation of Robot Arm Control Based on Matlab with Arduino Interface

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Abstract: -- In the present days, a number of situations exist where it is not possible for a human operator to do an activity on his/her own, due to a level of danger or difficulty involved. They may involve taking readings from an active volcano, entering a building on fire, diffusing a bomb, or collecting a radioactive sample. Rather than compromising on human lives, it is better to employ robotic systems for performing difficult tasks. Robotic systems are far superior in ensuring the accuracy of the system under adverse circumstances wherein a human operator may lose his/her composure and focus. Here we propose to build a robotic arm controlled by Matlab/Simulink interfacing with Arduino Uno. The development of this arm is based on Arduino platform and Matlab. A servo motor is a combination of DC motor, position control system, gears. The position of the shaft of the DC motor is adjusted by the control electronics in the servo, based on the duty ratio of the PWM signal. Servo is proposed for low speed, medium torque and accurate position application. These motors are used in robotic arm machines, flight controls and control systems. This project presents an interactive module for learning both the fundamental and practical issues of servo systems interface with ARDUINO UNO. This project, developed using Matlab coding tool, is used to control robotics applications. The objective of this project is to control the servo by using ARDUINO UNO with MATLAB & SIMULINK.

Keywords- Arduino UNO, Servo motors, ATmega 328, matlab, pwm signal , robotic arm.

I. INTRODUCTION

Nowadays, robots are increasingly being integrated into working tasks to replace humans, especially to perform repetitive tasks. In general, robotics can be divided into two areas, industrial and service robotics. International Federation of Robotics (IFR) defines a service robot as a robot which operates semi or fully autonomously to perform services useful to the well-being of humans and equipment, excluding manufacturing operations. These robots are currently used in many fields of applications including office, military tasks, hospital operations, dangerous environment and agriculture. Besides, it might be difficult or dangerous for humans to do some specific tasks like picking up explosive chemicals, defusing bombs or to pick and place a bomb somewhere for containment, and for repeated pick and place action in industries. Therefore, a robot can replace a human to do work. A robotic arm by definition is a robot manipulator, usually programmable, with functions similar to a human arm. The links of such a manipulator are connected by joints all owing either rotational motion (such as in an articulated robot) or translational (linear) displacement. The links of the manipulator can be considered to form a kinematic chain. The business end of the kinematic chain of the manipulator is called the end effector and it is analogous to the human hand. The end effectors can be designed to perform any desired task such as welding, gripping, spinning, dropping etc., depending on the application. The robotic arm can be autonomous or controlled manually, which imparts to it the characteristic to

be used to perform a variety of tasks with great accuracy. The robotic arm can be fixed or mobile (i.e. wheeled) and can be designed for industrial or home applications. [1][2]. There are various ways in which a robotic arm may be controlled. In the past, many researchers have worked to control a robotic arm through computer terminals, joysticks, even interfacing them with the internet so that they can be controlled from anywhere in the world [1],[2].

Typically, the following types of robotic arms are defined [3]:

- Cartesian/Gantry Robot
- Cylindrical Robot
- Spherical/Polar Robot
- SCARA Robot
- Articulate Robot
- Parallel Robot

The proposed robotic arm is an Articulated Robot. Usually most of the robotic arms are controlled by a central controller which makes use of values taken in from the terminal that are entered by the user at the terminal to move the arm to particular coordinates in space. This makes the control very difficult as the control values of the motors are very difficult to predict to achieve a particular movement. This is easily achieved by our project.

In this study we are implementing it using MATLAB to track the human arm using different X and Y axis to control the robotic arm. For each position of hand there is a color to detect its positions that is from shoulder to elbow the color let us say

Identifier Model for Ranking Fraud Recognition System

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Abstract - Inside the literature works since there are some related studies, like web ranking junk e-mail recognition, recognition of internet review junk e-mail additionally to mobile application recommendation, the impracticality of recognition of ranking fraud for mobile programs remains under-investigated. For achieving the crucial void, we advise to build up a ranking fraud recognition system intended for mobile programs. We submit an all-natural vision of ranking fraud while increasing your ranking fraud recognition system intended for mobile programs. It's extended by means of other domain created particulars for ranking fraud recognition. Inside the recommended system of a ranking fraud recognition system for mobile programs, it's worth watching the whole evidence are acquired by means of modelling of programs ranking, rating and review behaviours completely through record ideas tests.

Keywords— Ranking fraud detection, Mobile applications, Spam detection, Applications ranking, Review behaviours.

1. INTRODUCTION

Application designers has investigated various ways like marketing initiatives for promotion in the programs to get their programs rated for that possible finest level application leader boards. Within the recent occasions, instead of according to solutions of traditional marketing, shady application designers use a few in the fraud approach to boost their programs and lastly influence chart search positions across the application store. This is often typically implemented by way of usage of so-known to as human water military to boost application downloads, ratings furthermore to reviews in an exceedingly short time. Our careful observation describes that mobile programs aren't constantly rated high within leader board, however only inside a few in the leading occasions, which form various leading sessions and ranking fraud typically happens with such leading sessions. Thus, recognition of ranking fraud of mobile programs is actually to note ranking fraud within the leading sessions of mobile programs. Particularly, we advise a simple yet efficient formula to know leading sessions of every single application based on its historic ranking records. Using the research into programs ranking conduct, we uncover that fraudulent programs regularly contain various ranking designs in most the key session when in comparison on track programs hence we

distinguish a few in the fraud evidences from programs historic ranking records, creating works to obtain these ranking basis evidences of fraud. However, ranking based evidences are influenced by way of application developer status plus a handful of in the approved marketing campaigns thus, it is not enough to utilize ranking based evidences. Within our work we advise an exciting-natural vision of ranking fraud while growing your ranking fraud recognition system meant for mobile programs. Particularly we first suggest to exactly locating ranking fraud by way of mining active periods, particularly leading sessions, of mobile programs which leading sessions are leveraged for recognition of local anomaly instead of global anomaly of application search positions.

2. SYSTEM ARCHITECTURE

While requirement for preventing ranking fraud was extensively recognized, there's restricted understanding and concentrate in this area. Inside the recommended system of ranking fraud recognition system for mobile programs, it's worth watching the whole evidences are acquired by means of modelling of programs ranking, rating and review behaviours completely through record ideas tests. Recommended method is efficient and extended by means of other domain created particulars for ranking fraud recognition. Ranking fraud exists in leading sessions plus a method was ship to mining leading

EEE - 1

INTEGRATION OF RENEWABLE ENERGY PLANTS TO LOW VOLTAGE GRID IN URBAN AREAS USING CURRENT CONTROL REFERENCE TECHNIQUE

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ABSTRACT : This paper deals with a multi objective control technique for integration of distributed generation (DG) resources to the electrical power network. The proposed strategy provides compensation for active, reactive, and harmonic load current components during connection of DG link to the grid. The dynamic model of the proposed system is first elaborated in the stationary reference frame and then transformed into the synchronous orthogonal reference frame. The transformed variables are used in control of the voltage source converter as the heart of the interfacing system between DG resources and utility grid. By setting an appropriate compensation current references from the sensed load currents in control circuit loop of DG, the active, reactive, and harmonic load current components will be compensated with fast dynamic response, thereby achieving sinusoidal grid currents in phase with load voltages, while required power of the load is more than the maximum injected power of the DG to the grid. In addition, the proposed control method of this paper does not need a phase-locked loop in control circuit and has fast dynamic response in providing active and reactive power components of the grid-connected loads. The effectiveness of the proposed control technique in DG application is demonstrated with injection of maximum available power from the DG to the grid, increased power factor of the utility grid, and reduced total harmonic distortion of grid current through simulation results under steady-state and dynamic operating conditions.

I. INTRODUCTION

DISTRIBUTED generation (DG) technology also known as dispersed generation technology is electricity generating plant connected to a distribution grid rather than the transmission network. There are many types and sizes of DG facilities. These include wind farms, solar photovoltaic (PV) systems, hydroelectric power, or one of the new smaller generation technologies. The DG concept emerged as a way to integrate different power plants, increasing the DG owner's reliability and security, providing additional power quality benefits of the power grid [1], [2], and improving the air quality as a result of lower greenhouse gas emissions of air pollutants [3], [4]. In addition, the cost of the distribution power generation system using the renewable energies is on a falling trend and is expected to fall further as demand and production increase [5]. DG technology can come from conventional technologies such as motors powered by natural gas or diesel fuel or from renewable energy technologies, such as solar PV cells and wind farms. Over the past two decades, declines in the costs of smallscale electricity generation, increases in the reliability needs of many customers, and the partial deregulation of electricity markets have made DG technology more attractive to businesses and households as a supplement to utility-supplied power [6]. However, the increasing number of DG units in electrical networks requires new techniques for the operation and

management of the power networks in order to maintain or even to improve the power supply reliability and quality in the future. As a consequence, the control of DG unit should be improved to meet the requirements for the electrical network. Therefore, design of a control technique, which considers different situations of the electrical networks, becomes of high interest for interconnection of DG units to the power grid. Numerous control techniques and strategies have been proposed and reported for the control and connection of DG units to the electrical grid [7]. In [8], an overview of different control and synchronization techniques for DG systems has been presented. Different hardware structures for the DG system [9], control strategies for the grid-side converter, and control strategies under fault conditions were addressed [10], [11]. Different implementation techniques like dq, stationary, and natural frame control structures were presented, and their major characteristics were pointed out [12].

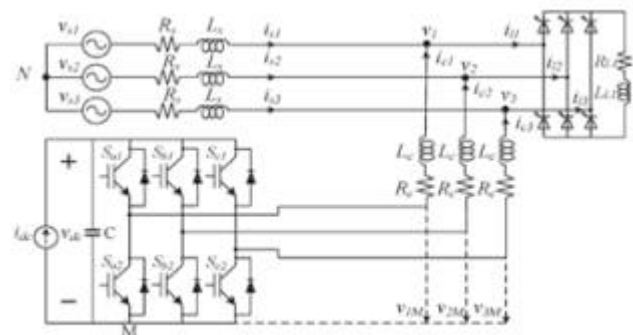


Fig. 1. Schematic diagram of the proposed DG system.

Several control strategies of interfacing system between DG resources and electrical grid proposed and presented for different objectives [1]. In all the proposed methods, a solution has been proposed for an important problem in electrical networks. In this paper, the authors propose a design of a multipurpose control strategy for VSC used in DG system. The idea is to integrate the DG resources to the power grid. With the proposed approach, the proposed VSC controls the injected active power flow from the DG source to the grid and also performs the compensation of reactive power and the nonlinear load current harmonics, keeping the grid current almost sinusoidal during connection of extra loads to the grid. The exact feedback linearization theory is applied in the design of the proposed controller. This control technique allows the decoupling of the currents and enhances their tracking of the fast change in the active and reactive power. This paper shows the complete simulation and experimental validation of the proposed method for all its features, i.e., active and reactive power generation along with current harmonic compensation.

A Dual Security and Protection Mechanism in Cloud Storage

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Abstract- *Cloud computing is rising technology which provide higher performance and may be use to supply forms of services like computer code as a Service (SAAS), Platform as a Service (PAAS) and Infrastructure as a Service (IAAS) at low price. The difficulty in providing SAAS is security of cloud user's knowledge once it's uploaded on cloud and authentication of cloud user before accessing the info. The plain knowledge isn't on top of things of cloud user once it's uploaded on cloud therefore it's prone to attack from cloud merchandiser itself associated an external aggressor. Additionally plain knowledge in transit is prone to attack. The projected methodology emphasizes on up knowledge security mechanism by implementing Two-factor authentication for shopper & provides encryption that shield knowledge from cloud merchandiser, associate aggressor and knowledge in transit additionally key sharing mechanism facilitate to share non-public knowledge with different cloud user.*

Keywords- *Authentication, Cloud computing, Key sharing.*

I. INTRODUCTION

Cloud computing refers to provision of procedure resources on demand via a electronic network. cloud computing provides varied services which has package as a service, platform as a service, infrastructure as a service. In ancient model of computing, user's laptop contain each knowledge and package; whereas in cloud computing there's no have to be compelled to contain knowledge and software solely the system desires software and browser. Cloud computing provides varied blessings that embrace economies of scale, dynamic provisioning, raised flexibility, low cost and lots of more[1]. As cloud computing share resources over the network, security is that the basic concern. knowledge house owners store their knowledge on external servers therefore knowledge confidentiality, authentication, access management area unit a number of the essential considerations. to shield user's privacy a method is to use authentication technique like username and watchword. Authentication is to envision user's identity, means that whether or not the person is same as he pretends to be. There area

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Applications of Gravitational Search Algorithm (GSA)

Fasi Ahmed Parvez*, G. Pradeepini** and Dr. Uma N. Dulhare***

ABSTRACT

Natural phenomenon and swarms habits are the first-rate and comfortable discipline of study among the many researchers. A colossal quantity of algorithms have been developed on the account of common phenomenon and swarms conduct. These algorithms have been applied on the quite a lot of computational problems for the sake of options and offered huge final result than typical methods however there is no such algorithm if you want to even be utilized for the whole computational problems. In 2009, a company new algorithm used to be developed on the behalf of notion of gravity and was once as soon as named gravitational search algorithm (GSA) for regular optimization disorders. In short span of time, GSA algorithms attain reputation amongst researchers and has been utilized to massive number of disorders corresponding to clustering, classification, and parameter identification and so on. This paper grants the compendious survey on the GSA algorithm and its functions as well as enlightens the applicability of GSA in information clustering & Fuzzy systems.

1. INTRODUCTION

Nature has more often than not been a regular supply of advice for researchers and scientists. A tremendous quantity of algorithms had been developed based on the average process of evolution, authorized directions, swarms habits and so forth. Nature influenced algorithms are the modern-day state of art algorithms & works good with optimization problems as good as one of a kind issues than the classical approaches in view that classical methods are rigid in nature. It has been proved through many researchers that nature influenced algorithms are convenient to solve intricate computational problems corresponding to optimize purpose points [1, 2], pattern consciousness [3, 4], manipulate aspects [5, 6], photo processing [7, 8], filter modeling [9, 10], clustering [3], classification [11] and so forth. In final one and half of of decade a few nature influenced algorithms had been developed similar to Particle swarm optimization (PSO), Genetic Algorithm (GA), Simulated Annealing (SA), Ant colony optimization (ACO), artificial Bee colony (ABC) optimization, colossal Bang big Crunch (BB-BC) and lots of others. These algorithms exhibit better results than classical Algorithms.

GSA is a heuristic optimization algorithm which has been gaining curiosity among the many scientific local simply nowadays. GSA is a nature motivated algorithm which is based on the Newton's law of gravity and the regulation of movement [1]. The algorithm is intended to toughen the performance inside the exploration and exploitation capabilities of a populace headquartered algorithm, based on gravity concepts. . GSA is usually recommended to exclude the space between masses in its system, whereas mass and distance are every crucial components of the law of gravity. Regardless of the criticism, the algorithm remains to be being explored and accepted with the help of the scientific regional.

The gravitational search algorithm is the trendy nature influenced algorithm proposed with the support of E. Rashedi [3] to clear up the optimization issues headquartered on the regulation of gravity. Many

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CDA Based Approach for Electronic

Health Attention Records in Cloud Computing

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Thota Srilatha, Asst.Professor,CSE Dept., Balaji Institute Of Technology And Science

ABSTRACT: *The patient's details concerning its safety and quality care area unit laugh as with success is critical for the clinic; however it's the requirement of ability between Health info Exchange at completely different hospitals. The Clinical Document Architecture (CDA) developed by HL7 may be a core document normal to assurer such ability, and extension of this document format is crucial for ability. Badly, hospitals aren't interested to adopt practical HIS owing to its readying value aside from in an exceedingly handful countries. This arises even once additional hospitals begin mistreatment the CDA document format as a result of the info unfold in numerous documents area unit exhausting to manage. during this paper, we tend to describe our CDA document generation and integration Open API service supported cloud computing, through that hospitals area unit enable to handily generate CDA documents while not having to buy proprietary computer code. Our CDA document integration system integrates multiple CDA documents per patient into one CDA document and doctor and patients will browse the clinical knowledge in written account order. Our system of CDA document generation and integration relies on cloud computing and therefore the service is obtainable in Open API. Developers mistreatment*

completely different platforms so will use our system to extend ability.

KEYWORDS: *Health information exchange, HL7, CDA, cloud computing, software as a service, Open API.*

1. INTRODUCTION

The attention trade is one amongst the world's largest and quickest growing industries, intense over ten % of gross domestic product (GDP) of most developed nations and features a major impact on any country's economy. The delivery of attention services essentially contains of 3 visible forms. medical aid, that is that the day-today care given by a attention supplier, and acts because the 1st contact and also the principal purpose of constant care of patients. Secondary Care is that the health care services, like acute care, provided by health professionals World Health Organization usually don't have 1st contact with patients, Cardiologists and Urologists as an example. Tertiary Care may be a specialized informatory health care, typically for inpatients and on referral from primary and secondary professional person for advanced medical investigation and treatment. The speedy emergence of the data Technology Solutions has benefited the attention trade. these days attention organizations are expected to deliver quicker, additional secured and continuous patient-care. IT-enabled attention applications alter

Internet of Things (IoT) - Internet Evolution

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Abstract:

The Internet is a living element, continually changing and developing. New applications and organizations are made constantly. Notwithstanding an advancing Internet, innovation is likewise changing the scene. Broadband availability is getting to be shoddy and omnipresent; gadgets are turning out to be all the more effective and littler with an assortment of on-board sensors. The expansion of more gadgets getting to be associated is prompting to another worldview: the Internet of Things. The Internet of Things is driven by an extension of the Internet through the incorporation of physical items joined with a capacity to give more quick witted administrations to the earth as more information gets to be accessible. Different application spaces extending from Green-IT and vitality productivity to coordinations are as of now profiting by Internet of Things ideas. There are difficulties connected with the Internet of Things, most unequivocally in territories of trust and security, institutionalization and administration required to guarantee a reasonable and reliable open Internet of Things which gives esteem to all of society. Web of Things is high on the exploration motivation of a few multinationals and also the European Commission and nations, for example, China. The examination led is driving the making of a valuable and effective Internet of Things. The advantages of Internet of Things to the creating and rising economies are critical, and systems to understand these should be found.

Keywords: Internet of Things, ubiquitous computing, broadband connectivity, standardization.

Introduction

The Internet of Things (IoT) is quickly advancing. There is a need to comprehend challenges in getting even and vertical application adjust and the key essentials required to accomplish the normal 50 billion associated gadgets in 2020. With over 27 years in the innovative business, Jim Chase has gone through his vocation working with clients and helping them get before innovation patterns and difficulties. As a trusted master, he utilizes his framework arrangements way to deal with business and customer cases around the world.

From associated things to living in the information, planning for difficulties and IoT availability: The Internet of Things (IoT) is by and large considered as interfacing things to the Internet and utilizing that association with give some sort of valuable remote observing or control of those things. This meaning of IoT is constrained, and references just part of the IoT development. It is basically a rebranding of the existing Machine to Machine (M2M) market of today. IoT in its culmination – where we live in the data is defined as:

“The IoT creates an intelligent, invisible network fabric that can be sensed, controlled and programmed. IoT-enabled products employ embedded technology that

Trust Based Substantiation Scheme Over Wireless Sensor Networks

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Abstract: *A wireless device network is mostly an enormous network with sizable amount of sensors nodes. It suffers from many constraints, like low computation capability, less storage capability, restricted energy resources, liability to physical capture, and therefore the use of insecure wireless communication channels. As the size and the density increases over the network, there are more chances of penetration of security in such network. These constraints build “security” in WSNs a challenge. Most of the protocols designed for wireless sensor networks consider energy efficiency but not security as a goal. In this present work, a Trust Based Secure Routing Protocol; TBSRP is designed to provide the security over the network. The presented work is a hybrid approach that performs the reliable node identification and provides the communication over the safe node. The presented work is divided in three main layers. In the first layer, the protocol level change is performed over the network. In the second layer, we have defined an authentication mechanism where Diffie–Hellman key exchange method is used to generate private and shared keys for every node in the network. At the third level of this presented work, a reliable routing approach is suggested. The trust analysis is performed here based on the honesty, reliability and the effective parameters. To demonstrate the utility of the proposed routing protocol, we apply it to a network having black hole attack. for every node, we have a tendency to establish the simplest trust composition and*

formation to maximize application performance. The conferred TBSRP approach is an efficient and reliable communication approach that may take the choice on next hop choice below the trust vector. Solely a trustful node is eligible to transmit information over the network. TBSRP is compared with AODV routing protocol and also the results of our work has shown that PDF is higher exploitation TBSRP than that of AODV routing protocol.

Keywords: Trust management, Security in wireless sensor networks, Secure routing in WSN.

I.INTRODUCTION

A wireless device network (WSN) consists of spatially distributed autonomous sensors to observe physical or environmental conditions, like temperature, sound, pressure, etc. and to hand and glove pass their information through the network to a main location. There square measure some crucial aspects we tend to invariably ought to confine mind once utilized with these networks; security is one in every of them. We tend to fully can't rely on any of our objects to be tamper proof or use any reasonably “trusted” computing platform since these characteristics typically build the individual nodes prohibitively expensive . Security stipulation typically vary with application and framework, however normally, security for wireless device networks ought to specialize



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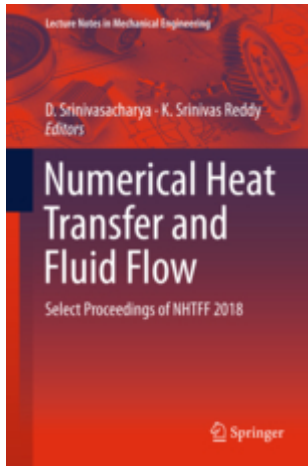
1. Detection and Classification of Exudates from RGB Fundus Images using K-Mean Clustering Technique **2.** Design Principles for Efficient Hybrid Cloud Architecture **3.** Abnormality Detection in Brain Images using Morphological Watershed Segmentation Method **4.** An Approach for Finding Colocation Patterns – Map Reduce Framework **5.** Battlefield Decision Support System **6.** Incipient Trends and Technologies in Unstructured Databases **7.** Efficient Mining of Negative Association Rules using Improved Frequent Pattern Tree **8.** Mining Borrowing Patterns from Library Transactional Database using Incremental Mining Algorithm **9.** A Secured Architecture of Mobile Payment Entrusted by Public Key Cryptography **10.** Re-Filterization of Negative Association Rules Based on Rule of Importance **11.** A Study on Security Issues in Platform-as-a-Service Model **12.** De-duplication of Data in Cloud **13.** Dermoscopy Image Classification Using Color Constancy **14.** Exchange of Distributed Knowledge in Peer-to-Peer Systems **15.** Survey on Cloud Security Issues and Attacks **16.** Packet Filtering for IP Forging using Term Frequency Technique **17.** Energy Efficiency Aspects in Cloud Computing **18.** Balancing Performance Accuracy and Precision for Secure Cloud Transactions **19.** Load Balancing Improvement in Task Scheduling **20.** Applying Privacy Policy by Design in Software Engineering **21.** Importance of SOA in Cloud Computing **22.** Most Competent Algorithm for Mining Frequent Items in Data Streams **23.** Typicality Based Collaborative Filtering Recommendation **24.** Natural Language Processing Technologies for Multi-Level Intelligent Spam EMail-Filter **25.** Multi tenancy and load distribution in IAAS cloud **26.** Li-Fi (Light Fidelity): Advancement in wireless communication technology **27.** Authentication in Cloud Computing with Password and Fingerprint **28.** Big Data Analysis in Healthcare System **29.** Survey on Classification of Components from Software Reuse Repository **30.** Performance Analysis of Hadoop Distributed File System Vs Local File System With Respect To Read & Write Operations **31.** Artificial Neural Network Model for Software Development Efforts Prediction: Review **32.** Enhancing the User Search Goals Using Feedback Sessions and Evaluation Method **33.** To Filter Unwanted Message from OSN by Using System **34.** Improve K-means Clustering with Extended Viewpoint using Classification **35.** A Five-Regime Model for a Balanced Strategy to Letting the Server to Operate in an Optimal Longest Period of Reasonable Time **36.** An Innovative Centralized Method for Cluster Developing in Wireless based Sensor Networks **37.** A Survey of Attacks and Countermeasures in Mobile Ad Hoc Networks **38.** Semantic Web Mining Using Ontology **39.** The Effective and in-centric approaches of Web Personalization **40.** Li-Fi-T based Collaborated Learning and Peer to Peer Learning Approaches for Future Engineering and Medical Education **41.** Big Data: Analysis, Opportunities and Challenges **42.** A Multi-Data Sharing in Cloud Storage Using Key Aggregate Searchable Encryption **43.** An Improved Stemmer using K-Mean Clustering for Telugu Language **44.** Big Data Opportunities and Challenges for Cyber Security **45.** Huge information security issues in view of quantum cryptography and protection with Confirmation **46.** Survey Paper on Challenges for MapReduce in Big Data Analysis **47.** A Novel Mechanism for Fine-grained Multi-keyword Search over Encrypted Cloud Data **48.** Analysis of Context Based Diversification for Keyword Search Queries over XML Data **49.** Multi-Authority Identity-Based Encryption in Cloud Computing **50.** Power Conscious Routing Etiquettes Outline Design Aspects in Wireless Sensor Networks **51.** Data Partition in Wireless sensor network using Cluster Analysis: A Survey **52.** Digital India –VLC Technology based Invention for Open High Speed Internet Service in Public and Private Places **53.** Identity Based Remote Data Integrity Checking with Data Dynamics and Public Auditing in Cloud **54.** A Study of Mobile Communication: Challenges and Attacks **55.** Developing SMS Secure Codes for Mobile Nets **56.** Critical Analysis of key safety, privacy and security issuesin overcoming barriers through Unmanned Aerial Vehicles (UAVs) **57.** Application of various Soft Computing Techniques for Prediction of Diseases **58.** Modified Hierarchical Pixel Clustering for Image Segmentation **59.** Optimal and fair buffer allocation in Wireless Mesh Networks **60.** Security of E-Transactions – A Survey **61.** Diagnosis of Diabetes by Applying Clustering Algorithms **62.** Study of AODV Protocol in the Presence of Worm Hole Attack **63.** Clustering Data Streams Based on Shared Density between

Micro-Clusters **64.** Role of Cloud Computing Paradigm in Education **65.** Classification Algorithms to Identify the Preferred Videos to Maximise Advertising Using Hadoop **66.** Data Encryption for Consumer's Data for Mobile Clients **67.** Curriculum Development Proposal for Technology-Based Software Engineering **68.** Sink Based Wireless Sensor Network **69.** Environmet of Open Source Platforms and Frameworks for Big Data **70.** Detecting Dynamic obstacles for mobile robots in path planning **71.** A Literature Survey on Mobile Computing Characteristics and Issues **72.** Mobile Cloud Computing: Future Trends and security issues **73.** Evaluating Soil Productivity using Fuzzy Logic Controller **74.** Information Security Problems and Proposed Algorithms for Cloud Computing **75.** Understanding Feature Selection in Text Categorization **76.** Secured Anti-Collusion Data Sharing Scheme for Dynamic Groups in the Cloud **77.** Web Evaluation and Usability Engineering Design Approach **78.** Network Coding Gain Optimization in wireless Ad-hoc Networks **79.** An Overview of Internet of Things: Its Recent Trends **80.** Survey of Digital Image Water Marking Techniques Using Neural Networks **81.** A Retractable scheme in Cloud using Identity Based Encryption **82.** Digital Image Watermarking: State-of-the-Art **83.** Semantic Sketch Based Image Retrieval using BoVW **84.** A Systematic Review on Measuring Testability for Object Oriented Design **85.** A Novel Approach to Code Refactoration based on Design Variations

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Dr. D. Srinivasacharya is a Professor of Mathematics at NIT Warangal. His major areas of research include computational fluid dynamics, convective heat and mass transfer, micropolar and couple stress fluid flows, non-Newtonian fluids, bio-mechanics, magnetohydrodynamics, and nanofluids flow modelling. He has authored more than 185 research papers in reputed and peer-reviewed international journals. Dr. Srinivasacharya has been actively involved in teaching undergraduate and postgraduate students, guiding PhD students and conducting major research projects at NIT Warangal. He has successfully guided fifteen Ph.D. students, completed four major research projects and is currently involved in three sponsored research projects funded by various national agencies. He has also organized several national and international workshops/conferences at NIT Warangal.

Dr. K. S. Reddy is a Professor of Mechanical Engineering at IIT Madras. His areas of specialization are renewable energy technologies, concentrating solar thermal and PV systems, energy efficiency and the environment. Currently, he is also an Honorary Professor at the University of Exeter, and Adjunct Professor at CEERI – CSIR, Chennai. He has published more than 200 research articles in leading international journals and conferences. He has co-authored a book entitled *Sustainable Energy and the Environment: A Clean Technology Approach* published by Springer. Dr. Reddy is actively involved in the development of concentrating solar power technologies in India and has strong associations with various industry partners. He has received several awards, such as the WSSET Innovation Award and Shri J. C. Bose Patent Award. He has also organized several national and international workshops at IIT Madras. Dr. Reddy is an expert member of various selection committees.

[Table of contents \(74 chapters\)](#)

Table of contents (74 chapters)

[Table of contents \(74 chapters\)](#)

An Approximate Solution of Fingering Phenomenon Arising in Porous Media by Successive Linearisation Method

Pages 1-8

Choksi, Bhumika G. (et al.)

[Preview Buy Chapter](#)

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Entropy Generation Analysis for a Micropolar Fluid Flow in an Annulus

Pages 9-15

Srinivasacharya, D. (et al.)

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Solution of Eighth-Order Boundary Value Problems by Petrov–Galerkin Method with Quintic and Sextic B-Splines

Pages 17-24

Kasi Viswanadham, K. N. S. (et al.)

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A Mathematical Study on Optimum Wall-to-Wall Thickness in Solar Chimney-Shaped Channel Using CFD

Pages 25-30

Dash, Alokjyoti (et al.)

[Preview Buy Chapter](#)

30,19 €

Estimation of Heat Transfer Coefficient and Reference Temperature in Jet Impingement Using Solution to Inverse Heat Conduction Problem

Pages 31-37

Kadam, Anil R. (et al.)

[Preview Buy Chapter](#)

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Investigation of Thermal Effects in a Ferrofluid-Based Porous Inclined Slider Bearing with Slip Conditions

Pages 39-46

Ram, Paras (et al.)

[Preview Buy Chapter](#)

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Thermal Convection in an Inclined Porous Layer with Effect of Heat Source

Pages 47-54

Matta, Anjanna

[Preview Buy Chapter](#)

30,19 €

MHD Flow and Heat Transfer of Immiscible Micropolar and Newtonian Fluids Through a Pipe: A Numerical Approach

Pages 55-64

Raje, Ankush (et al.)

[Preview Buy Chapter](#)

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Modeling and Simulation of High Redundancy Linear Electromechanical Actuator for Fault Tolerance

Pages 65-71

Arun Manohar, G. (et al.)

[Preview Buy Chapter](#)

30,19 €

Thermal Radiation and Thermodiffusion Effect on Convective Heat and Mass Transfer Flow of a Rotating Nanofluid in a Vertical Channel

Pages 73-81

Arundhati, V. (et al.)

[Preview Buy Chapter](#)

30,19 €

Transient Analysis of Third-Grade Fluid Flow Past a Vertical Cylinder Embedded in a Porous Medium

Pages 83-91

Hiremath, Ashwini (et al.)

[Preview Buy Chapter](#)

30,19 €

Natural Convective Flow of a Radiative Nanofluid Past an Inclined Plate in a Non-Darcy Porous Medium with Lateral Mass Flux

Pages 93-102

Venkata Rao, Ch. (et al.)

[Preview Buy Chapter](#)

30,19 €

Joule Heating and Thermophoresis Effects on Unsteady Natural Convection Flow of Doubly Stratified Fluid in a Porous Medium with Variable Fluxes: A Darcy–Brinkman Model

Pages 103-112

Madhava Reddy, Ch. (et al.)

[Preview Buy Chapter](#)

30,19 €

Performance Analysis of Domestic Refrigerator Using Hydrocarbon Refrigerant Mixtures with ANN and Fuzzy Logic System

Pages 113-121

Raghunatha Reddy, D. V. (et al.)

[Preview Buy Chapter](#)

30,19 €

Numerical Computation of the Blood Flow Characteristics Through the Tapered Stenotic Catheterised Artery with Flexible Wall

Pages 123-130

Surabhi, K. M. (et al.)

[Preview Buy Chapter](#)

30,19 €

Combined Influence of Radiation Absorption and Hall Current on MHD Free Convective Heat and Mass Transfer Flow Past a Stretching Sheet

Pages 131-140

Deepthi, J. (et al.)

[Preview Buy Chapter](#)

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Numerical Study for the Solidification of Nanoparticle-Enhanced Phase Change Materials (NEPCM) Filled in a Wavy Cavity

Pages 141-149

Kumar Nagilla, Dheeraj (et al.)

[Preview Buy Chapter](#)

30,19 €

Analysis of Forced Convection Heat Transfer Through Graded PPI Metal Foams

Pages 151-158

Kotresha, Banjara (et al.)

[Preview Buy Chapter](#)

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Accelerating MCMC Using Model Reduction for the Estimation of Boundary Properties Within Bayesian Framework

Pages 159-165

Gnanasekaran, N. (et al.)

[Preview Buy Chapter](#)

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Boundary Layer Flow and Heat Transfer of Casson Fluid Over a Porous Linear Stretching Sheet with Variable Wall Temperature and Radiation

Pages 167-176

Sankad, G. C. (et al.)

[Preview Buy Chapter](#)

30,19 €

Isogeometric Boundary Element Method for Analysis and Design Optimization—A Survey

Pages 177-182

Ummidivarapu, Vinay K. (et al.)

[Preview Buy Chapter](#)

30,19 €

Unsteady Boundary Layer Flow of Magneto-Hydrodynamic Couple Stress Fluid over a Vertical Plate with Chemical Reaction

Pages 183-191

Basha, Hussain (et al.)

[Preview Buy Chapter](#)

30,19 €

A Mathematical Approach to Study the Blood Flow Through Stenosed Artery with Suspension of Nanoparticles

Pages 193-202

Maruthi Prasad, K. (et al.)

[Preview Buy Chapter](#)

30,19 €

Non-Newtonian Fluid Flow Past a Porous Sphere Using Darcy's Law

Pages 203-209

Krishna Prasad, M.

[Preview Buy Chapter](#)

30,19 €

Navier Slip Effects on Mixed Convection Flow of Cu–Water Nanofluid in a Vertical Channel

Pages 211-222

Ontela, Surender (et al.)

[Preview Buy Chapter](#)

30,19 €

Heat Flow in a Rectangular Plate

Pages 223-231

Pavankumar Reddy, M. (et al.)

[Preview Buy Chapter](#)

30,19 €

Flow of Blood Through a Porous Bifurcated Artery with Mild Stenosis Under the Influence of Applied Magnetic Field

Pages 233-240

Madhava Rao, G. (et al.)

[Preview Buy Chapter](#)

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Finite Element Model to Study the Effect of Lipoma and Liposarcoma on Heat Flow in Tissue Layers of Human Limbs

Pages 241-247

Agrawal, Mamta (et al.)

[Preview Buy Chapter](#)

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Effects of Thermal Stratification and Variable Permeability on Melting over a Vertical Plate

Pages 249-256

Madhavi, M. V. D. N. S. (et al.)

[Preview Buy Chapter](#)

30,19 €

Effect of Chemical Reaction and Thermal Radiation on the Flow over an Exponentially Stretching Sheet with Convective Thermal Condition

Pages 257-266

Srinivasacharya, D. (et al.)

[Preview Buy Chapter](#)

30,19 €

Soret and Viscous Dissipation Effects on MHD Flow Along an Inclined Channel: Nonlinear Boussinesq Approximation

Pages 267-274

Naveen, P. (et al.)

[Preview Buy Chapter](#)

30,19 €

Optimization of Temperature of a 3D Duct with the Position of Heat Sources Under Mixed Convection

Pages 275-284

Kumar, V. Ganesh (et al.)

[Preview Buy Chapter](#)

30,19 €

Viscous Fluid Flow Past a Permeable Cylinder

Pages 285-293

Aparna, P. (et al.)

[Preview Buy Chapter](#)

30,19 €

Numerical Solution of Load-Bearing Capacity of Journal Bearing Using Shape Function

Pages 295-303

Pathak, Pooja (et al.)

[Preview Buy Chapter](#)

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A Numerical Scheme for Solving a Coupled System of Singularly Perturbed Delay Differential Equations of Reaction-Diffusion Type

Pages 305-312

Gupta, Trun (et al.)

[Preview Buy Chapter](#)

30,19 €

A Computational Study on the Stenosis Circularity for a Severe Stenosed Idealized Artery

Pages 313-320

Prashantha, B. (et al.)

[Preview Buy Chapter](#)

30,19 €

Flow and Heat Transfer of Carbon Nanotubes Nanofluid Flow Over a 3-D Inclined Nonlinear Stretching Sheet with Porous Media

Pages 321-329

Jain, Shalini (et al.)

[Preview Buy Chapter](#)

30,19 €

MHD Boundary Layer Liquid Metal Flow in the Presence of Thermal Radiation Using Non-similar Solution

Pages 331-337

Mondal, S. (et al.)

[Preview Buy Chapter](#)

30,19 €

Similarity Analysis of Heat Transfer and MHD Fluid Flow of Powell–Eyring Nanofluid

Pages 339-348

Rajput, Govind R. (et al.)

[Preview Buy Chapter](#)

30,19 €

Entropy Generation Analysis of Radiative Rotating Casson Fluid Flow Over a Stretching Surface Under Convective Boundary Conditions

Pages 349-357

Jain, Shalini (et al.)

[Preview Buy Chapter](#)

30,19 €

Study on Effects of Slots on Natural Convection in a Rectangular Cavity Using CFD

Pages 359-365

Kumar, Rakesh (et al.)

[Preview Buy Chapter](#)

30,19 €

Numerical Investigation on Heat Transfer and Fluid Flow Characteristics of Natural Circulation Loop with Parallel Channels

Pages 367-374

Bejjam, Ramesh Babu (et al.)

[Preview Buy Chapter](#)

30,19 €

Numerical Study of Heat Transfer Characteristics in Shell-and-Tube Heat Exchanger

Pages 375-383

Gugulothu, Ravi (et al.)

[Preview Buy Chapter](#)

30,19 €

Application of Green's Function to Establish a Technique in Predicting Jet Impingement Convective Heat Transfer Rate from Transient Temperature Measurements

Pages 385-391

Parida, Ritesh Kumar (et al.)

[Preview Buy Chapter](#)

30,19 €

Mathematical Simulation of Cavitation with Column Separation in Pressurized Pump Pipeline Systems

Pages 393-398

Ruben, Nerella (et al.)

[Preview Buy Chapter](#)

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MHD Flow of Micropolar Fluid in the Annular Region of Rotating Horizontal Cylinders with Cross Diffusion, Thermophoresis, and Chemical Reaction Effects

Pages 399-407

Nagaraju, G. (et al.)

[Preview Buy Chapter](#)

30,19 €

Numerical and CFD Analysis of Joints in Flow-Through Pipe

Pages 409-416

Telrandhe, Rupesh G. (et al.)

[Preview Buy Chapter](#)

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2D Numerical Analysis of Natural Convection in Vertical Fins on Horizontal Base

Pages 417-423

Karmakar, Sunirmal (et al.)

[Preview Buy Chapter](#)

30,19 €

Effect of Loop Diameter on Two-Phase Natural Circulation Loop Performance

Pages 425-432

Venkata Sai Sudheer, S. (et al.)

[Preview Buy Chapter](#)

30,19 €

Studies on Heat and Mass Transfer Coefficients of Pearl Millet in a Batch Fluidized Bed Dryer

Pages 433-439

Yogendrasasidhar, D. (et al.)

[Preview Buy Chapter](#)

30,19 €

Effect of Channel Confinement and Hydraulic Diameter on Heat Transfer in a Micro-channel

Pages 441-448

Sathishkumar, D. (et al.)

[Preview Buy Chapter](#)

30,19 €

Numerical Study on Performance of Savonius-Type Vertical-Axis Wind Turbine, with and Without Omnidirectional Guide Vane

Pages 449-455

Alli, Mahammad Sehzad (et al.)

[Preview Buy Chapter](#)

30,19 €

Free Convection of Nanofluid Flow Between Concentric Cylinders with Hall and Ion-Slip Effects

Pages 457-467

Srinivasacharya, D. (et al.)

[Preview Buy Chapter](#)

30,19 €

Chemically Reacting Radiative Casson Fluid Over an Inclined Porous Plate: A Numerical Study

Pages 469-479

Shamshuddin, MD. (et al.)

[Preview Buy Chapter](#)

30,19 €

Field-Driven Motion of Ferrofluids in Biaxial Magnetic Nanowire with Inertial Effects

Pages 481-487

Dwivedi, Sharad

[Preview Buy Chapter](#)

30,19 €

Analytical Study of Fluid Flow in a Channel Partially Filled with Porous Medium with Darcy–Brinkman Equation

Pages 489-496

Sharath Kumar Reddy, J. (et al.)

[Preview Buy Chapter](#)

30,19 €

Dissipative Effect on Heat and Mass Transfer by Natural Convection over a Radiating Needle in a Porous Medium

Pages 497-504

Sayyed, S. R. (et al.)

[Preview Buy Chapter](#)

30,19 €

Numerical Solution of Sixth Order Boundary Value Problems by Galerkin Method with Quartic B-splines

Pages 505-510

Ballem, Sreenivasulu (et al.)

[Preview Buy Chapter](#)

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Numerical and Experimental Studies of Nanofluid as a Coolant Flowing Through a Circular Tube

Pages 511-518

Praveena Devi, N. (et al.)

[Preview Buy Chapter](#)

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Influence of Slip on Peristaltic Motion of a Nanofluid Prone to the Tube

Pages 519-526

Maruthi Prasad, K. (et al.)

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Exact Solutions of Couple Stress Fluid Flows

Pages 527-535

Joseph, Subin P.

[Preview Buy Chapter](#)

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Finite Element Study of Convective Heat and Mass Transfer of Two Fluids in a Vertical Channel of Variable Width with Soret and Dufour Effects

Pages 537-546

Suresh Babu, B. (et al.)

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Thermal Modeling of a High-Pressure Autoclave Reactor for Hydrothermal Carbonization

Pages 547-553

Sushmitha, D. (et al.)

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Effects of MHD and Radiation on Chemically Reacting Newtonian Fluid Flow over an Inclined Porous Stretching Surface Embedded in Porous Medium

Pages 555-565

RamReddy, Ch. (et al.)

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Couple-Stress Fluid Flow Due to Rectilinear Oscillations of a Circular Cylinder: Case of Resonance

Pages 567-574

Govinda Rao, T. (et al.)

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Effect of Heat Generation and Viscous Dissipation on MHD 3D Casson Nanofluid Flow Past an Impermeable Stretching Sheet

Pages 575-585

Thumma, Thirupathi (et al.)

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Radiation, Dissipation, and Dufour Effects on MHD Free Convection Flow Through a Vertical Oscillatory Porous Plate with Ion Slip Current

Pages 587-596

Rajakumar, K. V. B. (et al.)

[Preview Buy Chapter](#)

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Bottom Heated Mixed Convective Flow in Lid-Driven Cubical Cavities

Pages 597-602

Rani, H. P. (et al.)

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Effect of Magnetic Field on the Squeeze Film Between Anisotropic Porous Rough Plates

Pages 603-612

Muthu, P. (et al.)

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A Numerical Study on Heat Transfer Characteristics of Two-Dimensional Film Cooling

Pages 613-619

Ademane, Vashista G. (et al.)

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Instability Conditions in a Porous Medium Due to Horizontal Magnetic Field

Pages 621-628

Benerji Babu, A. (et al.)

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Mathematical Analysis of Steady MHD Flow Between Two Infinite Parallel Plates in an Inclined Magnetic Field

Pages 629-636

Manjula, V. (et al.)

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Laminar Mixed Convection Flow of Cu–Water Nanofluid in a Vertical Channel with Viscous Dissipation

Pages 637-648

Ontela, Surender (et al.)

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A New Initial Value Technique for Singular Perturbation Problems Using Exponentially Finite Difference Scheme

Pages 649-657

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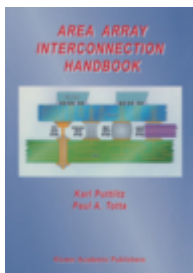
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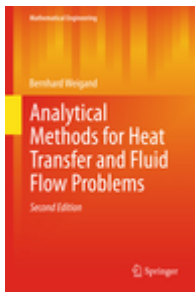
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[Weigand, B. \(2015\)](#)

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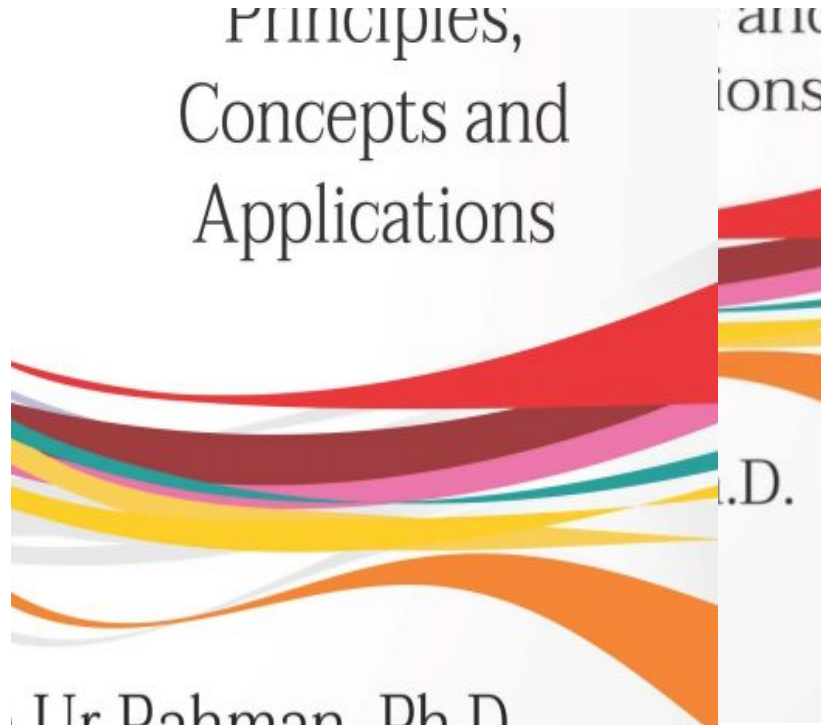
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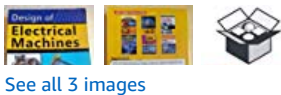
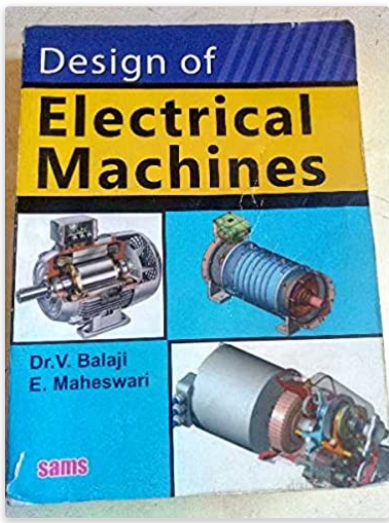
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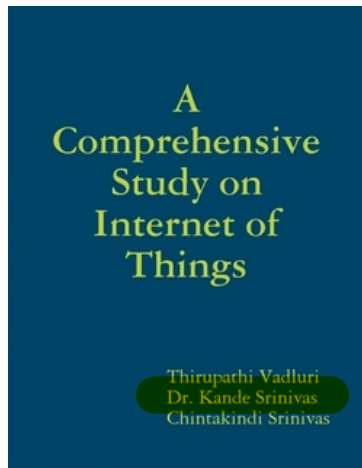


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**A Comprehensive Study
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CONTENTS

S. NO.	PARTICULARS	PAGE. NO.
Chapter – 01	INTRODUCTION	01
Chapter – 02	The Future of Design	27
Chapter – 03	INTERNET PRINCIPLES	42
Chapter – 04	OPEN SOURCE SEMANTIC WEB INFRASTRUCTURE FOR MANAGING IoT RESOURCES IN THE CLOUD	62
Chapter – 05	PROTOTYPING EMBEDDED DEVICES	83
Chapter – 06	STREAM PROCESSING IN IoT: FOUNDATIONS, STATE-OF-THE-ART, AND FUTURE DIRECTION	139
	REFERENCES	160

CHAPTER - I

INTERNET OF THINGS: AN OVERVIEW

INTRODUCTION

After four decades from the advent of Internet by ARPANET [1], the term “Internet” refers to the vast category of applications and protocols built on top of sophisticated and interconnected computer networks, serving billions of users around the world in 24/7 fashion. Indeed, we are at the beginning of an emerging era where ubiquitous communication and connectivity is neither a dream nor a challenge anymore. Subsequently, the focus has shifted toward a seamless integration of people and devices to converge the physical realm with human-made virtual environments, creating the so-called Internet of Things (IoT) utopia.

A closer look at this phenomenon reveals two important pillars of IoT: “Internet” and “Things” that require more clarification. Although it seems that every object capable of connecting to the Internet will fall into the “Things” category, this notation is used to encompass a more generic set of entities, including smart devices, sensors, human beings, and any other object that is aware of its context and is able to communicate with other entities, making it accessible at anytime, anywhere. This implies that objects are required to be accessible without any time or place restrictions.

Ubiquitous connectivity is a crucial requirement of IoT, and, to fulfill it, applications need to support a diverse set of devices and communication protocols, from tiny sensors capable of sensing and reporting a desired factor, to powerful back-end servers that are utilized for data analysis and knowledge extraction. This also requires integration of mobile devices, edge devices like routers and smart hubs, and humans in the loop as controllers.

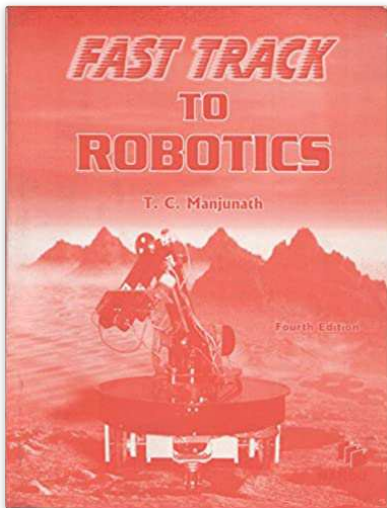
Initially, Radio-Frequency Identification (RFID) used to be the dominant technology behind IoT development, but with further technological achievements, wireless sensor networks (WSN) and Bluetooth-enabled devices augmented the mainstream adoption of the IoT trend.

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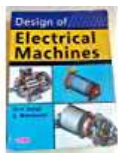
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 *Dr. S. Manikandan*

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It gives me a great pleasure to complete and submit this thesis entitled “**A Novel Approach To Adaptive Noise Cancellation For Speech Signal Using Wavelet Based Grazing Estimation Of Signal Method**” , within a stipulated time. It has been my earnest effort to contribute for the future generations in the educational and research pursuits in the field of Electronics and telecommunication and hope that this work may open door for years to come.

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Dr. S. Manikandan

LIST OF ABBREVIATIONS

ABBREVIATION	FULL FORM OF ABBREVIATION
DSP	Digital Signal Processors
ANC	Active Noise Cancellation
FXLMS	Filtered-X Least Mean Square
IIR	Infinite Impulse Response
FIR	Finite Impulse Response
RLS	Recursive Least Squares
FFT	Fast Fourier Transform
LMS	Least Mean Squares
ANN	Artificial Neural Network
HVAC	Heating, Ventilation and Air Conditioning
EVM	Evaluation Module
SNR	Signal to Noise Ratio
PSNR	Peak Signal to Noise Ratio

ABSTRACT

This thesis introduces the reducing the content of noise present in the received Speech signals for wireless communication medium by using Wavelet based Grazing Estimation of Signal (WGES) Method. The received signal is corrupted due to mixing of white Gaussian noise. This proposed method is designed based on the superposition principle with eight possible cases. By conducting multiple possible cases of signal movement the noise signal is moved to opposite direction of original signal. This output is cascaded with wavelet transforms techniques with compare the available control algorithms output error signals. Compared to other available control algorithms the proposed method is Simple to implement, yields good performance and converges quickly. This proposed technique is implemented using Matlab software and DSP processor .This computer output simulation results confirm the effectiveness of our proposed algorithm.

CONTENTS

CHAPTER 1	
INTRODUCTION.....	1
CHAPTER 2	
LITERATURE SURVEY FOR ACTIVE NOISE CONTROL SYSTEMS.....	5
2.1 INTRODUCTION.....	7
2.1.1 CURRENT APPLICATIONS.....	8
2.1.2 PERFORMANCE EVALUATION & PRACTICAL CONSIDERATIONS.....	8
2.1.3 ANC SYSTEM PROPERTIES	9
2.2 BROAD – BAND FEED FORWARD ANC	9
2.3 FILTERED – XLMS ALGORITHM	12
2.3.1 DERIVATION OF THE FXLMS ALGORITHM	12
2.3.2 ANALYSIS OF FXLMS ALGORITHM	14
2.3.3 LEAKY FXLMS ALGORITHM	15
2.4 NARROW – BAND FEED FORWARD ANC.....	17
2.4.1 WAVEFORM SYNTHESIS METHOD.....	17
2.4.2 ADAPTIVE NOTCH FILTER	18
2.5 SINGLE CHANNEL FEEDBACK ANC SYSTEM	21
2.6 MULTIPLE CHANNEL ANC	24
2.7 NLINE SECONDARY – PATH MODELING	25
2.8 CONCLUSION.....	26
CHAPTER 3	
PROPOSED METHOD TO ACTIVE NOISE FEED FORWARD CONTROL SYSTEMS USING DELTA RULE ALGORITHM.....	27
3.1 DESIGN OF ANC SYSTEM USING LMS ALGORITHM	29
3.2 DESIGN OF ANC SYSTEM USING RLS ALGORITHM.....	33
3.3 DESIGN OF ANC USING ARTIFICIAL NEURAL NETWORKS	34
3.3.1 DELTA RULE ALGORITHM	35
3.4 SIMULATION AND RESULTS	36

3.5	CONCLUSION.....	38
-----	-----------------	----

CHAPTER 4

	PROPOSED METHOD TO ACTIVE NOISE CONTROL SYSTEM FOR REAL-TIME NOISE REDUCTION USING THE TMS320C5416 PROCESSOR.....	39
--	--	-----------

4.1	MATHEMATICAL MODELING OF ADAPTIVE NOISE FILTER	42
4.2	IMPLEMENTATION OF ANC USING TMS320C5416 PROCESSOR.....	44
4.3	REAL TIME IMPLEMENTATION OF ANC USING LMS ALGORITHM IN MATLAB	45
4.4	CONCLUSION.....	48

CHAPTER 5

	BY USING TMS 320C5402 DSP PROCESSOR CREATE THE DESIGN OF ACTIVE NOISE CANCELLATION FOR SPEECH SIGNAL	49
--	---	-----------

5.1	DESIGN OF FEEDBACK ACTIVE NOISE CONTROL	52
5.2	DESIGN OF PRACTICAL SETUP	53
5.3	SETUP FOR SPEAKER MICROPHONE	54
5.4	DESIGN OF LEAST SQUARE ALGORITHM	54
5.5	DUCT SYSTEM SECONDARY PATH MODELING	55
5.6	ANALYSIS OF ADAPTIVE NOISE CANCELLATION	58
5.7	CANCELLATION FOR RESULTS AND ANALYSIS.....	59
5.8	CONCLUSION.....	60

CHAPTER 6

	PROPOSED METHOD TO ADAPTIVE NOISE CANCELLATION FOR SPEECH SIGNALS USING WAVELET BASED GES METHOD.....	61
--	--	-----------

6.1	PROBLEM STATEMENT.....	64
6.2	MATHEMATICAL MODELING OF GRAZING ESTIMATION OF SIGNAL METHOD.....	64
6.3	PROPOSED METHOD FOR POSSIBLE CASES.....	66

6.4	PROPOSED GES ALGORITHM	73
6.4.1	EMBEDDING GES WITH WAVELET TRANSFORM TECHNIQUE [WGES]	75
6.5	SIMULATION RESULTS AND DISCUSSION	75
6.6	CONCLUSION	82
 CHAPTER 7		
	CONCLUSION AND FUTURE WORK	83
7.1	CONCLUSION	85
7.2	FUTURE WORK	86
 CHAPTER 8		
	REFERENCES AND PAPER PUBLICATIONS	87
8.1	REFERENCES	89
8.2	PAPER PUBLICATIONS	98
8.2.1	PAPERS PUBLISHED IN IEEE XPLORE	98
8.2.2	PAPER PUBLICATIONS IN INTERNATIONAL JOURNALS.....	98
 CHAPTER 9		
	APPENDIX.....	101
9.1	"C" CODE FOR LMS ALGORITHM	103
9.2	THE ASM CODE GENERATED FOR TMS320C5402 KIT	104

LIST OF FIGURES

Fig. No.	TITLE	Page No.
2.1	Signal – channel broad band feed forward ANC system in a duct	9
2.2	System identification of Active Noise Control System	10
2.3	Simplified block diagram of Active Noise Control system	11
2.4	Block Diagram of ANC system using the FLXMS algorithm	13
2.5	Equivalent diagram if Fig.4 for slow adaptation and $\hat{S}(z) = S(z)$	14
2.6	Block diagram of ANC system with feedback	16
2.7	ANC with acoustic feedback neutralization	16
2.8	Equivalent diagram of waveform synthesis method using impulse train input and neglecting secondary path effects	17
2.9	Signal – frequency adaptive notch filter	19
2.10	Single-frequency ANC system using the FXLMS algorithm	20
2.11	Block diagram of signal frequency active noise equalizer	21
2.12	Block diagram of basic active noise Control system	21

Fig. No.	TITLE	Page No.
2.13	Wideband adaptive feedback ANC system using the FXLMS algorithm	22
2.14	Block diagram of adaptive predictor	23
2.15	Hybrid ANC system with combination of feedback ANC and feed forward ANC	23
2.16	Hybrid ANC system using the FIR feed forward ANC with the FXLMS algorithm	23
2.17	Structure of a multiple – channel acoustic ANC system with J reference inputs, K secondary sources, and M error sensors	24
2.18	Block diagram of an adaptive multiple channel feed forward ANC system with feedback paths	25
2.19	Block diagram for Real-Time secondary-path modeling technique	26
3.1	Block diagram of the ANC control system using LMS algorithm	30
3.2	Input Gaussian Noise	36
3.3	Residual noise of LMS Algorithm	37
3.4	Residual noise of RLS Algorithm	37
3.5	Residual noise of Delta Rule Algorithm	37
4.1	Simple Active Noise detection model	42
4.2	Critical Issues in the design of an Active Noise Filter	43

Fig. No.	TITLE	Page No.
4.3	Simulation result for Error signal	46
4.4	Simulation result for Adaptive Filter using a delay time of two counts	46
4.5	Noise signal in time domain at an error microphone	47
4.6	Noise signal in noise power spectrum at an error microphone	47
5.1	Block diagram of Adaptive Filter System Using FXLMS Algorithm	53
5.2	Block Diagram in Duct Systems	54
5.3	Block diagram of Adaptive Filter Using Least Mean Square	55
5.4	Block diagram of System Identification Using Offline	56
5.5	Using step sizes d & μ values	57
5.6	Results in Cancellation result on pure tone noise at 130 Hz	58
5.7	Results in Cancellation result on pure tone noise at 110+120+130 Hz	59
5.8	Results in Cancellation result on Pure Tone Noise at 100+110+120+130 Hz	60
6.1	Depiction of Estimated Signal	72
6.2	Block diagram of Grazing Estimation Method	74

Fig. No.	TITLE	Page No.
6.3	Block diagram of Wavelet Denoising	75
6.4	System performance in time domain	76
6.5	System performance in Frequency Domain	77
6.6	Represents the gain in the PSNR	77
6.7	Analysis of proposed method using Ding sound	81
6.8	Analysis of proposed method using S10mwb Speech signal	81

LIST OF TABLES

Table No.	TITLE	Page No.
4.1	Total noise reduction in the Error Microphone	48
6.1	Comparisons of various methods for s10mwb speech signal	79
6.2	Comparisons of various methods for ding sound signal	79
6.3	Comparisons of various methods for ding sound signal.	80

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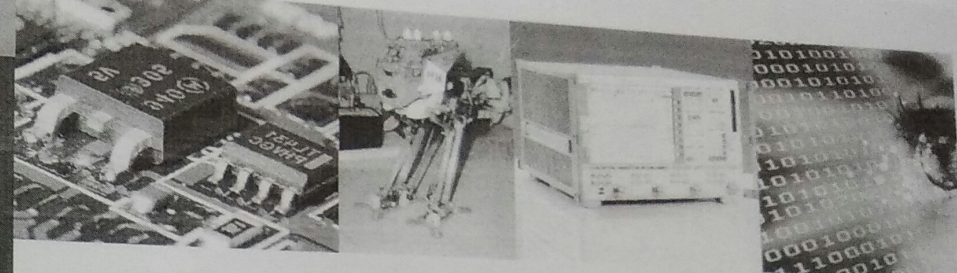


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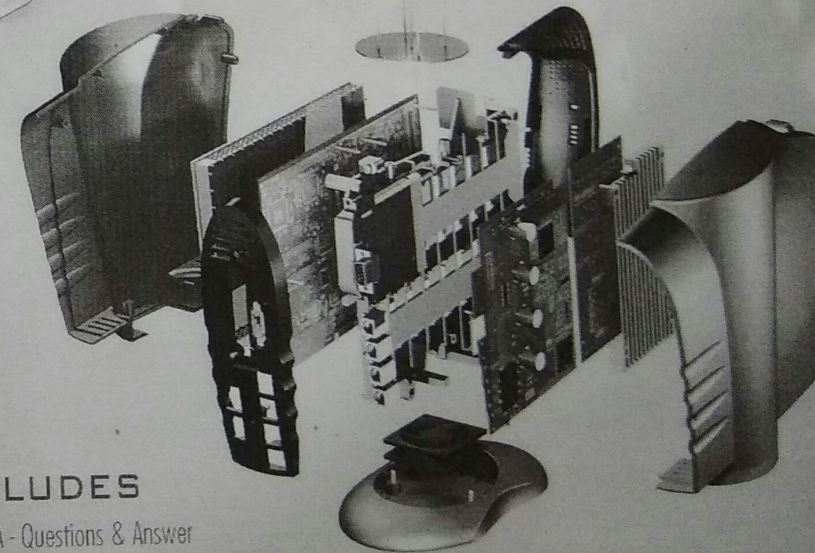
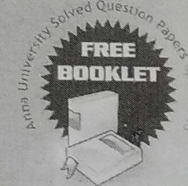


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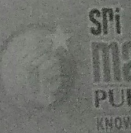
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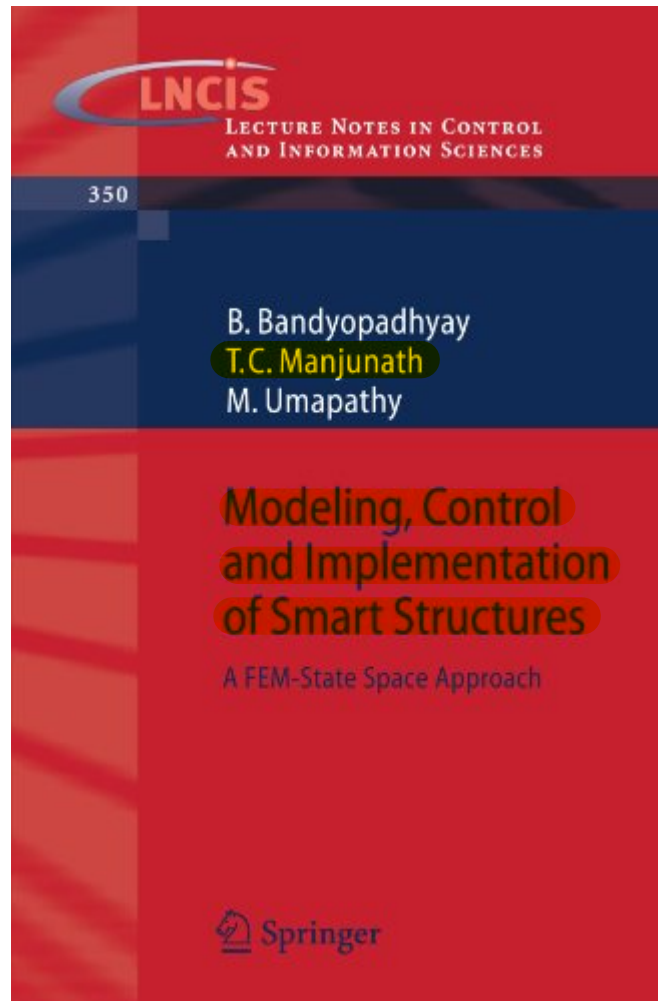
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“Where the mind is without fear and the head is held high;
Where knowledge is free;
Where the world has not been broken up into fragments by narrow domestic
walls;
Where words come out from the depth of truth;
Where tireless striving stretches its arms towards perfection;
Where the clear stream of reason has not lost its way into the dreary desert
sand of dead habit;
Where the mind is led forward by thee into ever-widening thought and action

Into that heaven of freedom, my Father, let my country awake.”

..... *Rabindranath Tagore*

Dedicated to our Wives

Tamisra, Uma, Sujatha

and
Children

Trisha, Nidhisha and Nikhitha, Rahul

Preface

Smart materials and smart structures, often called as the intelligent structures forms a new rapidly growing interdisciplinary technology in the modern day world embracing the fields of materials, structures, mechatronics, sensor - actuator systems, information and signal processing, electronics, mathematics, control and are basically distributed parameter systems.

A common feature in majority of the structures is the active vibration control problem, which has to be dealt with as it would lead to the degradation of the structural performance if left uncontrolled. A modest attempt is made to reduce the structural vibrations in smart cantilever beam using various control strategies and is presented in this monograph, which is entirely based on the authors work. Some of the developed control techniques are also experimentally verified.

Much of the research work done in the area of smart structures so far is mainly concentrated in the modeling and control techniques, static and dynamic analysis which make use of state feedback, output feedback principles, linear quadratic regulator, optimal control and PID based techniques, etc... Since most of these types of control techniques needs all the system states for feedback, which may not be available for measurement, they may suffer from the problem of real time implementation and some times need a state observer for control purposes. These drawbacks could be overcome by the use of multirate output feedback techniques (MROF).

With the increasing use of computers and discrete-time samplers in controller implementation in the recent past, discrete-time systems and computer based control have become the topics that have a lot of potential in them. An MROF based control technique can be applied to almost all the systems which are controllable and observable, while at the same time being simple enough as not to tax the computers too much.

VIII Preface

State feedback algorithms can be converted into output feedback algorithms by the use of multirate output feedback sampling technique. Consequently, the MROF based control strategies has the advantages of both the state feedback and output feedback control philosophies. This has further opened up the field of multirate output feedback based discrete time sliding mode control of smart structures.

The authors would like to express their deep sense of gratitude to their parents and teachers who have made them capable enough to write this book.

The authors wish to place on record their hearty thanks to many of the individuals who had helped them directly or indirectly in completing this monograph. Notable among them being Prof. P. Seshu of Mechanical Engineering Department, IIT Bombay, who had helped the authors by giving constructive suggestions in the preparation of some part of this monograph. The authors would like to thank Prof. P.S.V. Nataraj of Systems and Control Engg. Dept. for his cooperation during the preparation of this monograph.

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Mumbai-400076,
Maharashtra, India,
August 2006.

Bijnan Bandyopadhyay
Tadaga Channaveerappa Manjunath
Managanathan Umapathy

Contents

1	Introduction to Smart Structures	1
1.1	Smart Materials and Structures - Theory and Concepts	1
1.2	Active Vibration Control (AVC)	3
1.3	A Brief Survey on Smart Structures Research	4
1.4	Review of Beam Theories	7
1.4.1	Euler-Bernoulli Beam Theory	7
1.4.2	Timoshenko Beam Theory	8
1.5	Mathematical Models for Smart Structures	9
1.6	Review of Control Techniques	11
1.6.1	Multirate Output Feedback	11
1.6.2	Periodic Output Feedback	12
1.6.3	Fast Output Sampling Feedback	13
1.6.4	Robust Decentralized Multirate Output Feedback	13
1.6.5	Model Order Reduction	14
1.6.6	Sliding Mode Control	14
1.7	Contributions of the Monograph	16
1.7.1	Modeling of Smart Structures	16
1.7.2	Design of POF Controllers	18
1.7.3	Design of FOS Controllers	19
1.7.4	Design of DSM Controllers	20
1.7.5	Implementation of the Designed Controllers	20
1.8	Motivation for Modeling and Control of Smart Structures	21
2	Modeling of Smart Structures	23
2.1	Modeling of Smart Structures Using Euler-Bernoulli Beam Theory	23
2.1.1	Modeling of Smart Beams as SISO Systems for 2 and 3 Vibratory Modes	24
2.1.2	Modeling of Smart Beams as MIMO Systems for 2 and 3 Vibratory Modes	44

X	Contents	
	2.1.3 Modeling of the Smart Structure as Multimodel System Comprising of Multivariable Plants	48
	2.1.4 Modeling of Smart Beams for 6 Vibratory Modes (Higher Order)	52
	2.1.5 Conclusions	54
	2.2 Modeling of Smart Structures Based on Timoshenko Beam Theory	55
	2.2.1 Modeling of SISO Structures with Surface Mounted Shear Sensors and Actuators	55
	2.2.2 Modeling of Smart Beams with Surface Mounted Sensors-Actuators for a MIMO Case	70
	2.2.3 Modeling of Smart Timoshenko Cantilever Beam with Embedded Shear Sensors and Actuators as SISO and MIMO Systems	71
	2.2.4 Conclusions	85
3	Periodic Output Feedback Controllers for Smart Structures	87
	3.1 A Brief Review of the Periodic Output Feedback Control Technique	87
	3.2 Controller Design for Smart Structures Modelled Using EB Theory	90
	3.2.1 Design of SISO Controllers for Smart Beam Divided into 3, 4, 5 Finite Elements	90
	3.2.2 Design of MIMO Controller for a Multivariable System ..	98
	3.2.3 Design of Robust Decentralized Fault Tolerant Controller for Smart Structures	101
	3.2.4 Robust Decentralized Periodic Output Feedback Controller Design via Reduced Order Model for Multimodel System	108
	3.3 Controller Design for Smart Structures Modelled Using Timoshenko Theory	118
	3.3.1 Design of SISO Controllers for Smart Beams Using Surface Mounted Piezos	118
	3.3.2 Design of MIMO Controllers for Smart Beam with Surface Mounted Piezos	124
	3.3.3 Design of SISO Controllers for Smart Beams Using Embedded Piezos	131
	3.3.4 Design of MIMO Controller for Smart Beams Using Embedded Piezos	137
	3.4 Conclusions	142
4	Fast Output Sampling Feedback Controllers for Smart Structures	145
	4.1 A Brief Review of the Fast Output Sampling Feedback Control Technique	145

4.2	Controller Design for Smart Structures Modelled Using EB Theory	150
4.2.1	Design of SISO Controllers for Smart Beam Divided into 3, 4, 5 Finite Elements	150
4.2.2	Design of MIMO FOS Controller for a Multivariable System	155
4.2.3	Design of Robust Decentralized Fault Tolerant Controller for Smart Structures	159
4.2.4	Robust Decentralized Fast Output Sampling Feedback Controller Design via Reduced Order Model for Multivariable Systems	170
4.3	Controller Design for Smart Structures Modelled Using Timoshenko Theory	178
4.3.1	Design of SISO Controllers for Smart Beams Using Surface Mounted Piezos	178
4.3.2	Design of MIMO FOS Controller for Smart Beam Using Surface Mounted Piezos	182
4.3.3	Design of SISO Controllers for Smart Beams Using Embedded Piezos	185
4.3.4	Design of MIMO Controller for Smart Beams Using Embedded Piezos	189
4.4	Conclusions	192
5	Discrete Time Sliding Mode Control for Smart Structures ..	195
5.1	Discrete Time Sliding Mode Control with Switching Function ..	195
5.1.1	Controller Design for Euler-Bernoulli Smart Beams as SISO Systems	197
5.1.2	Controller Design for Euler-Bernoulli Smart Beam as MIMO System	202
5.1.3	Controller Design for Timoshenko Smart Beams with Surface Mounted PZT's as SISO Systems	204
5.1.4	Controller Design for Timoshenko Smart Beams with Surface Mounted PZT's as MIMO System	205
5.1.5	Controller Design for Timoshenko Smart Beams with Embedded PZT's for a SISO Case	207
5.1.6	Controller Design for Timoshenko Smart Beam with Embedded PZT's for a MIMO Case	208
5.2	Discrete Time Sliding Mode Control Without Switching Function ..	209
5.2.1	Controller Design for Euler-Bernoulli Smart Beams as SISO Systems	212
5.2.2	Controller Design for Euler-Bernoulli Smart Beam as a MIMO System	214
5.2.3	Controller Design for Smart Timoshenko Beam with Surface Mounted PZT's as SISO System	215