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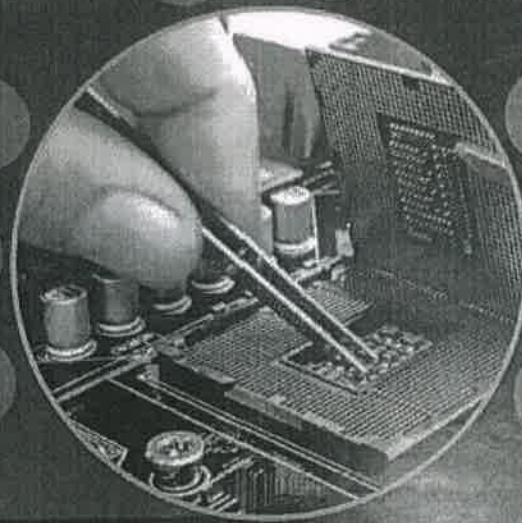
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A STEP TOWARDS LEARNING

A Text Book of
**Basic Electrical
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Improve Secured Digital Image Watermarking with Discrete Cosine Transform and ABCT

Publisher: IEEE

Cite This



Astra Rani ; Aditi Purohit ; Rajesh Bognhey All Authors

34
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Abstract
Document Sections

- I. INTRODUCTION
- II. LITERATURE SURVEY
- III. PROPOSED METHODOLOGY
- IV. SIMULATION AND

Nowadays Because of the internet's popularity and accessibility, digital watermarking is critical for preventing illegal redistribution of digital data. As a method of protecting sensitive information stored in digital images, "digital watermarking" has gained popularity. The goal of this proposed work is to suggest a secure watermarking scheme with applications in the medical field. As well as being undetectable, this scheme can also withstand numerous forms of attack. In order to maintain the security and authenticity of patient data, the proposed work requires the concealment of sensitive information within the host image. Domain concepts, like the spatial domain, transform domain, and wavelets, can be used to categorize image watermarking methods. DCT algorithms increase computation time while also degrading image data hiding performance due to low PSNR values. The proposed technique ABCT increases PSNR values or makes digital image data more robust and invisible. Taking into account the following issues in the



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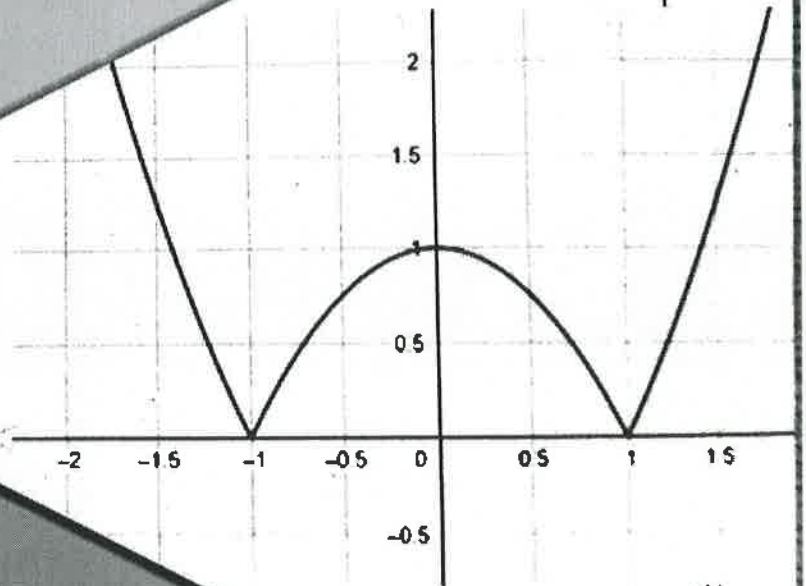


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Chapter 41 On Product of Doubt $\psi - \bar{Q} -$ Fuzzy Subgroup



A. Mohamed Ismail, M. Premkumar, A. Prasanna, S. Ismail Mohideen,
and Dhirendra Kumar Shukla

IOT with Smart Systems

Proceedings of ICTIS 2022, Volume 2

Abstract In this brief communication, we define the algebraic systems on product of two Doubt $\psi - \bar{Q} -$ Fuzzy subsets (Doubt $\psi - \bar{Q} - FSGs$), Doubt $\psi - \bar{Q} -$ Fuzzy subgroups (Doubt $\psi - \bar{Q} - FSGs$), conjugate Doubt $\psi - \bar{Q} -$ Fuzzy subgroups (Doubt $\psi - \bar{Q} - FCSG$), Doubt $\psi - \bar{Q} -$ Fuzzy normal subgroups (Doubt $\psi - \bar{Q} - FNSGs$) and several logarithmic structures.

Keywords $\bar{Q} - FS$ · Two $\bar{Q} - FSGs$ · $\bar{Q} - FG$ · Doubt $\psi - \bar{Q} - FSG$ · Doubt $\psi - \bar{Q} - FNSG$ · Doubt $\psi - \bar{Q} - FCSG$

Mathematics Subject Classification 03E72 · 08A72 · 20N25

41.1 Introduction

Zadeh [1] started working on fuzzy sets in 1965. Rosenfield [2] invented the fuzzy subgroup theory in 1971; Nagarajan [3] the new structure and composition of the Q-fuzzy groups in 2009 and Q-fuzzy normal concept by Priya et al. [4] 2013. Mukherjee et al. [5] investigated fuzzy groups in 1984 and development of the fuzzy normal subgroup in 1986 [6]; Nova [7] fuzzy sets and their applications in 1989 and Ray [8] "fuzzy subgroup products" in 1999. Prasanna et al. [2] explained the concept of an algebraic structure for the product of $\psi - \bar{Q} -$ Fuzzy Subgroups and normal subgroups in 2020 and in 2020 introduced a new notation $\kappa - \bar{Q} -$ Fuzzy orders for

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J. Choudrie et al. (eds.), *IOT with Smart Systems*, Smart Innovation, Systems and Technologies 312, https://doi.org/10.1007/978-981-19-3575-6_41

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ICT with Intelligent Applications

Proceedings of ICTIS 2022, Volume 1

Chapter 11 On Characteristics of κ - Q -Fuzzy Translation and κ - Q -Multiplication in T-Ideal in T-Algebras

M. Premkumar , A. Prasanna , Dhirendra Kumar Shukla ,
and S. Ismail Mohideen

Abstract The conception of κ - Q - ω -FT and κ - Q - ω -FM was taught in this article. Furthermore, we generalized the κ - Q - ω -FT of T-ideals and κ - Q - ω -FM of T-ideals in T-Algebra, explained some of the theorems and propositions, and investigated several related algebraic characteristics.

Keywords Fuzzy set (FS) · Fuzzy subset (FSB) · Fuzzy T-Ideal (FTI) · κ - Q -Fuzzy translation and multiplication (κ - Q -FT and κ - Q -FM)

Mathematics Subject Classification MSC2020-zbMATH-03B52

11.1 Introduction

The conception of fuzzy sets was proposed by Zadeh [8]. The multiple concepts of FT and FM on B-Algebras were illustrated by Prem [3]. Prem [4] offered a more recent develop of FT and FM on BG-Algebras. The characteristics of the FT of fuzzy β -Ideals of β -Algebras were developed by Abu et al. [1]. The new notation of FT and FM of BCK-Algebra was described by Lee [2]. Fuzzy subalgebras and FTI in TM-Algebras were developed by Tamilarasi [7]. Prem [5] investigated on ω -FT and ω -FM in BH-Algebras in 2020. In the year 2020, Prasanna et al. [6] illustrated the many concepts of $-Q$ -FO relative to $-Q$ -FSG and cyclic group. Algebraic characteristics of κ - Q -FT and κ - Q -FM have been explored in T-ideals with some results in this context.

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Application of Mathematical Modeling in Various Fields in Light of Fuzzy Logic

Dr. Dharendra Kumar Shukla

Department of Education in Science and Mathematics, Regional Institute of Education, NCERT, Bhopal (M.P.), India

Abstract

In this chapter, the author explains the concept of "fuzzy logic" and various approaches. In the present scenario, fuzzy logic is a widely accepted and used term in the light of development for applications, tools, and techniques as Fuzzy Cognitive Maps, Fuzzy Cluster Means, etc. Here Fuzzy Logic Concept has been studied and tried to explain applications of the concept in various fields as Mathematics, Science, Business, Finance, Controller of Temperature, Home appliances, Aeronautics, Defence, Medical Science and Bioinformatics, and Engineering Fields such as Mechanical, Industrial, Production, Electronics, Chemical, Automotives, Signal Processing and Communication, and Robotics.

Keywords: Fuzzy logic, fuzzy cognitive maps, induced fuzzy cognitive maps, fuzzy cluster means, fuzzy logic control, mathematical modeling

12.1 Introduction

12.1.1 Mathematical Modeling

"The model represents something in a thumbnail; an illustration or image; a conception or analogy for the observation of something that can not be detected; a system of axioms, details & assumptions that are provided by a mathematical explanation of the object or state of the business." Different methods can characterize devices and behaviors. Physical object words,

Email: dhirendrashukla1982@gmail.com

Ramakant Bhardwaj, Jyoti Mishra, Saryendra Narayan and Gopalakrishnan Susseendran (eds.)
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Acceptance Letter

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Dear Contributor,

Dr. Jyoti Nema, Dr. Dharendra Kumar Shukla

Assistant Professor, Department of Education in Science and Mathematics, Regional Institute of Education, NCERT, Bhopal(M.P.)

Assistant Professor, Department of Education in Science and Mathematics, Regional Institute of Education, NCERT, Bhopal(M.P.)

The Editorial Team is pleased to inform you that your chapter "**PROBABILISTIC APPROACH TO UNDERSTAND DIABETES OF TYPE 1 AND 2**" is accepted for the publication in an Edited Book titled:

"**Advancement In Biotechnology and Pharmaceutical Mathematics**".

ISBN NO: 978-93-91342-36 -4

We thank you very much for your contribution.

Thanks, and regards,

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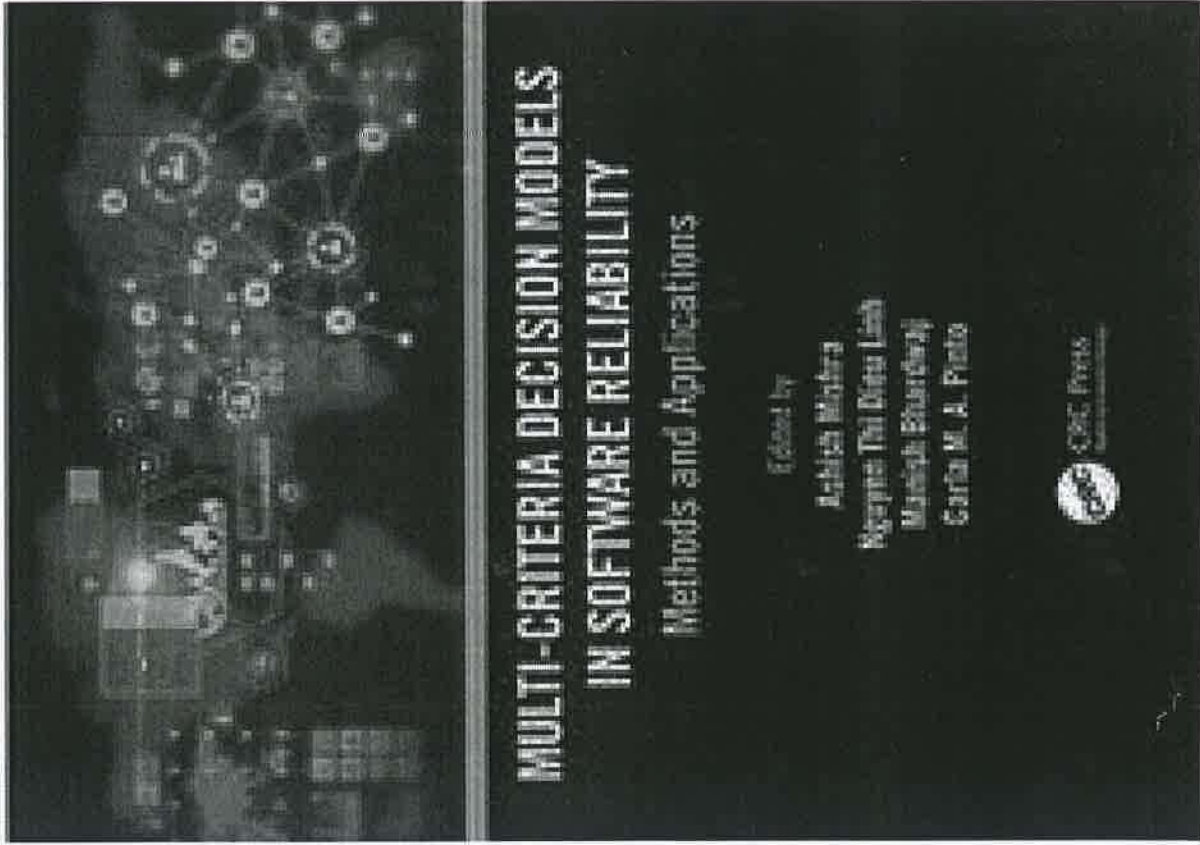
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By
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Sharma*

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Pages 12

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Implementation of Siamese Network for Similarity Computation and Prediction of Handwritten Digits

Publisher: IEEE

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Taj Mohammad; Rajesh Boughey; Ritu Prasad All Authors

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Abstract

Abstract:

Consistently machines are getting increasingly modern, from evaluation of addition to handwritten text recognition. Machines have made our lives more precise, sensible, and quick. Goal of this paper is to get familiar with a similarity measure to distinguish the distance of data points in vector space and afterward recognize the labels of unlabeled data through label propagation. Thus, proposed technique has matched

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Design and Analysis of Modified Truncated Flexible T Shape Patch Antenna with DGS for 5G and IoT Application

Publisher: IEEE

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MD. Ayaz Ali Khan ; Sandeep Kumar Shukla ; Saima Khan ; Pranay Yadav All Authors

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Abstract

Abstract:

The next generation of communication will focus on flexible technology, in which flexible patch antennas play an important role. The flexible patch antenna depends on the flexible substrate. This research work proposed a fifth generation (5G) covering an ultra-wide band frequency range between 10 to 40 GHz. The proposed modified truncated flexible T shape patch antenna is based on different substrates such as RT

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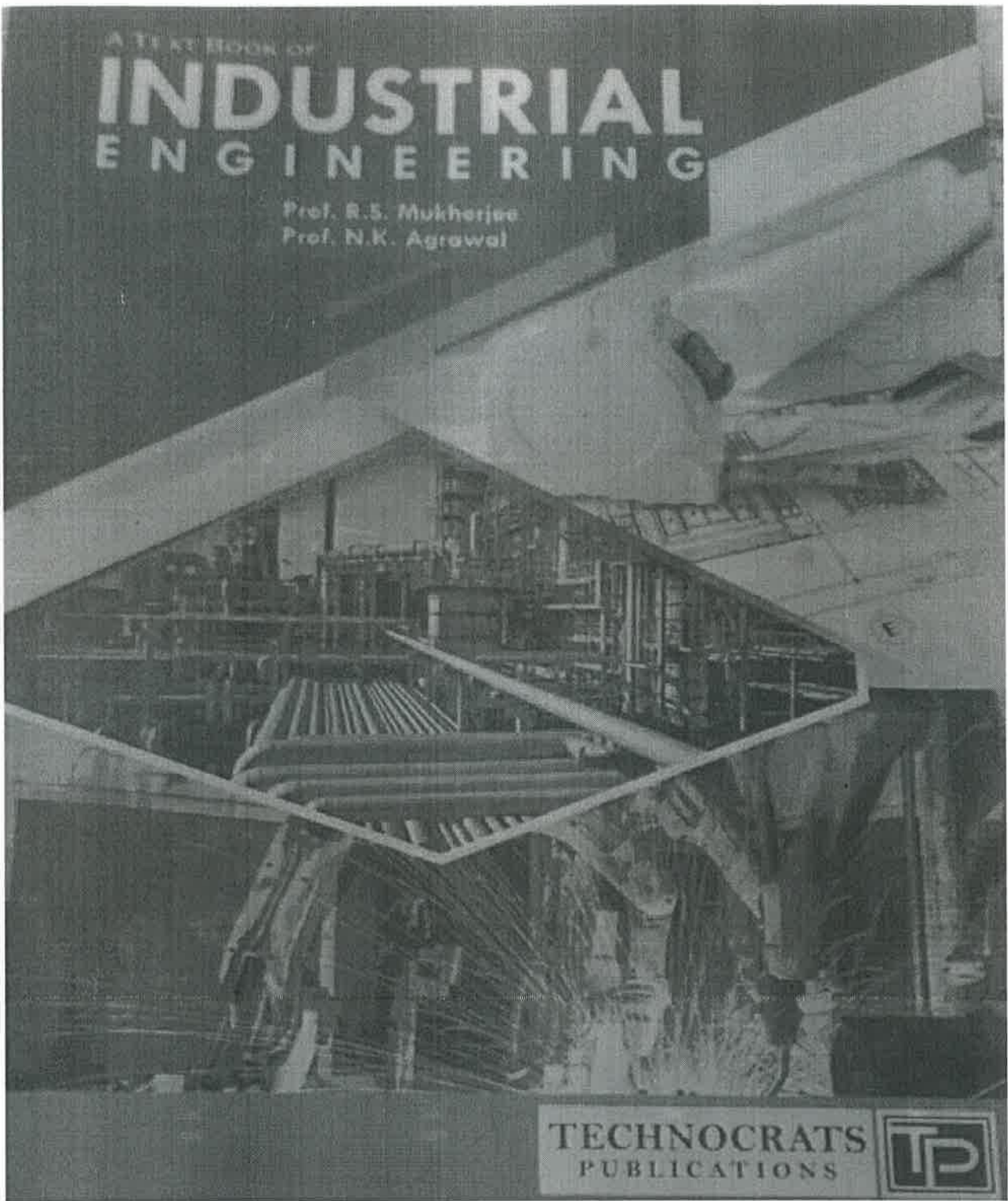
Introduction



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Dr Yogadhar Pandey

Machine Learning Based Automated Approach To Detect Brain Disease Anomalies

Authors Shatrughan Dubey, Yogadhar Pandey

Publication date 2021/11/27

Journal 2021 - International Conference on Computational Intelligence and Computing Applications (ICCICA)

Publisher IEEE

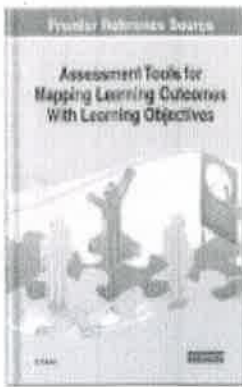
Description This paper proposed a new model which is based on the classification methods such as support vector machine, neural network, and optimization methods which is biologically inspired method for improving the classifier results in terms of some performance parameters such as accuracy, precision, recall etc., here we measure the all performance parameters for the various dataset such as heart patients, liver patients and cancer patients and improve the rate of classification or results with compare than other existing techniques. The all patient's dataset which is taken from the machine learning repository which provide the authentic dataset for the research work and the simulation software is matlab. In this paper our experimental results shows that the better detection rate of classification for performance parameters than other existing techniques.

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Traditional Teaching Pedagogy: Student vs. Teacher Centric

Shagwati Charan Patel (Shri Shankaracharya Group of Institutions, Bhilai, India), Naveen Goel (Shri Shankaracharya Group of Institutions, Bhilai, India), and Kusumanjali Deshmukh (Government Naveen College, Bhilai, India)

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Abstract

In recent decades, education systems have become challenging tasks. However, in the era of globalization, educational systems have to find a new approach of teaching and learning towards a more active and productive education. This chapter covers conventional teaching approach paradigm, which is teacher-centric, and a new paradigm, which is student-centric. In **teacher-centric** methods, teachers play significant roles in the learning process. Teachers are source of knowledge providers, facilitator, or evaluator to observe students to acquire the correct answers, yet students are considered as learners who passively receive information. In contrast, **in the student-centric methods**, students play a vital role in their learning course and **resolve how** to accomplish their required learning outcomes on their own. **They also figure out their facts** and are allowed to think critically. This chapter finds that **this new paradigm could develop more active learners who have acquired the skills of problem solving, independent thinking, and autonomous learning.**

Chapter Preview

Top

1.1 Introduction

In the past decade, our educational system depends on improving methods in teaching and learning **which is completely depends on teachers' instructions**. However, in the era of modernization, our educational system requires a new approach of teaching and learning at each and every level to support more dynamic and constructive education. Learning is the process of gathering and attaining novel or adapting present knowledge, skill, **value and behaviour** which may come to change in information, knowledge and experiences. In learning process four components are involve, they are teacher, students, curriculum and instructional material and infrastructure. Teaching is basically a process of interacting and engaging students in activity that will enable them to acquire the knowledge, skill as well as worthwhile values and attitudes (Barr & Tagg, 1995; Brown, 2008). Good teaching must be well planned, where all such events are interrelated to each other. It also gives experience of good learning or circumstances that will ensure the proper understanding of things, used of application and thinking of critical situation. Teaching method is group of principles, ideas, or belief centered on the learning which must be converted into our classroom. A class consist of set of students where almost of the similar oldness are managed and controlled by a teacher in a classroom (Collins & O'Brien, 2003). Usually teacher teaches in class room, matter from a subject with a fixed period of interval, thus we can say class room teaching consist of three aspects subject, **teacher** and students. The main aim of this teaching learning process is to empower the students, to obtain the knowledge and easily know the concept imparted **in the classroom**. Every student is dissimilar from another, they have their own ways of learning and understanding capacity. So, it is most challenging task to deliver or understand the concept in a class room. In single method or way, **Single ways of teaching cannot be reach** effective for learning process to the each and every student in classroom. Teacher must have to adopt various **teaching and learning process to understand the each and every student**. Teaching approach consist of **plan, implement and evaluation**. **We do evaluation** after feedback and then re-plan the things. In planning phase includes, **decision should be according to need** of the learner, goal should be achieved, content selection and inspiration to bring out the goal. Implementation phase must have to place the diverse events to attain the objective. It also **characterizes the work completed to achieve the need of the scope** of work (Cornelius-White, 2007; Kasim, 2014; Liu et al., 2005). In evaluation phase **objective with learning outcomes will be matched**. **Teaching is basically divided into three stages, that are:**

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Analysis of Effort Estimation for Test Suite using Control Graph

Publisher: IEEE

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Babita Pathik ; Meena Sharma All Authors

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Abstract

Abstract:

The software test estimation is a vital process for business prospects. The testing effort estimates with test case generation and execution time of test data. This paper evaluates the effort estimated for test cases by branch coverage on Control Flow Graph (CFG). Develop CFG for the programs, and extract all independent paths. The graph covers the information flow among all the classes, their methods, functions, and statements. Examine the number of test cases by assessing the cyclomatic complexity metrics of the

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ii. Related work




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A Novel Approach for SQL Injection Avoidance Using Two-Level Restricted Application Prevention (TRAP) Technique

Conference paper | First Online: 02 August 2020

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Abstract

Abstract:

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Keywords

The aim of this analysis is the creation and associate build up the system to forestall an organism against each well-known and a new attacks, and functions as an adaptive distribute defense system or adaptive artificial system. Artificial Immune Systems abstract the structure of immune systems to include memory, fault detection and adaptive learning. Wea tend to propose associate system primarily based real time



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Abstract

Abstract:

The design of 14 bit pipeline ADC has been carried out in the proposed research work by using TSMC 018µm technology. The design is implemented in LT SPICE SWICHER CAD -III Schematic Editor and the results are verified with LT spice and simulation is viewed in LT SPICE. The key design module is summarized here. 3-TIQ comparator is worn in the single stage of ADC. An analog multiplexer is used as

Document Sections

Introduction



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Performance of Channel Estimating Approach in Mobile OFDM System

Publisher: IEEE Cite This PDF

Pratima Tripathi; Sandeep Kumar Shukla; Abhishek Bhatt All Authors

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<p>Abstract</p> <hr/> <p>Document Sections</p> <ul style="list-style-type: none"> I. Introduction Related work 	<p>Abstract:</p> <p>To analyze the presentation of compressed channel estimation (CCE) based on orthogonal matching pursuit (OMP), They suggest a mathematical structure based on four significant standardization mean square errors (NMSE): complete NMSE (NMSET), NMSE on the dominant channel portion (NMSED), NMSE (NMSEL) caused through "lost error," or NMSE (NMSE F) activated by "false alarms" of deterministic pilot patterns. We then derived a closed-form formula to estimate the upper limit of NMSEDs</p>
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Review of Machine Learning methods for Identification of Cyberbullying in Social Media

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Abstract— In the modern era, the usage of internet has increased tremendously which in turn has led to the evolution of large amount of data .Cyber world has its own pros and cons. One of the alarming situations in web 4.0 is cyber bullying a type of cyber-crime. When the bullying occurs on line with the aid of technology it is known as cyber bullying. This research paper have surveyed the work done by 30 different researchers on cyber bullying, and elaborated on different methodologies adopted by them for the detection of bullying, and how you protect the society from online evil act of cyber bullying.

Keywords—cyberbullying; machine learning; victim; social media; dataset.

I. INTRODUCTION

Across the globe due to the tremendous increase in the availability of data services, addiction of social media among the society has increased proportionally. Just like other countries, India has also witnessed a drastic rise in the cyber bullying. In this era of web 4.0 where people live in digital and online platforms, it is very difficult to protect the society from the alarming rise in cyber-crime. It has been surveyed that the major victims of cyber bullying are adolescents. Different cyber bullying attacks that are performed by attacker are: (1) Sending or posting hateful or abusive comments with an intention to harm the character of an individual (2) Posting an inappropriate image or video. (3) Creation of a false or improper website.(4) Issuing online threats that cause a person to kill themselves or injure another person. (5) Triggering online religious, racial, ethnic or political hatred by posting hate comments or videos. (6) Faking an online identity to collect information. According to the survey India ranks 3rd in position for witnessing cyber bullying. Individual can act as victim, attacker, and bystander in the cyber bullying. Attacker- Person who does cyber bullying is known as attacker. Victim- Person who suffers from bully is called victim. Bystander- Person who supports victim is called bystander. Each of these roles are important and their identification plays an important role in the detection process of cyber bullying. This paper outline the

work done by 30 different researchers in the field of cyber bullying in terms of contribution, methodology adopted, research gap, future work.

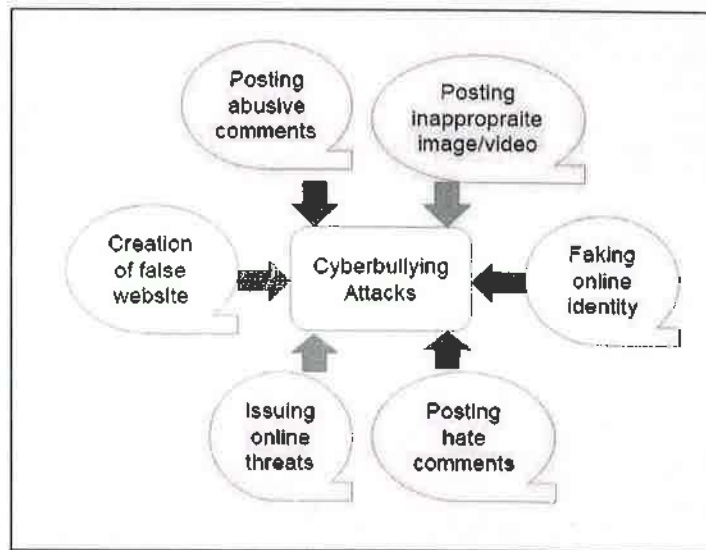


Figure 1. Classification chart for cyberbullying attacks

II. LITERATURE SURVEY

In today's era of web 4.0 online presence of individuals in society has reached great heights which in turn associates the risk of various cybercrime associated with it. Cyberbullying can occur through posting bad videos, image of an individual without his or her permission. Textual Cyberbullying involves posting irrelevant comments ,foul, threatening messages which may lead to severe impact on the victim. According to the survey the top social networking sites that are mostly used by adolescents in India are Facebook, Twitter, Linked-in, Instagram, Youtube. These social networking sites behave as a medium for the attackers to attack the victims. Figure 2 depicts the trends of networking sites mostly used by adolescents, along




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On Some Algebraic Properties of μ -Anti-Fuzzy Subgroups

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ABSTRACT

In this paper, we initiate the study of the notion of μ -anti-FSG defined on fuzzy set and probe things that each anti-FSG is μ -anti-FSG. We also prove that the merchandise of two μ -anti-FSGs is μ -anti-FSG. Moreover, we innovate the concepts of μ -anti-FNSG and factor group with reference to this newly defined anti-FNSG and prove various fundament algebraic characteristics of those phenomenon. Additionally, we investigate the effect on the image and inverse image of μ -anti-FSG (μ -anti-FNSG) under group homomorphism and establish an isomorphism between the quotient group regard to μ -anti-FSG and quotient group with regard to the normal sub-group H_{A_μ} .

Keywords: Fuzzy set, Fuzzy Subset, Anti-fuzzy subgroup, Anti-fuzzy normal subgroup, μ -Anti-fuzzy set, μ -Anti-fuzzy subgroup, μ -Anti-fuzzy normal subgroup, μ -Anti-fuzzy coset, μ -Anti-fuzzy left cose, μ -Anti-fuzzy right coset

Introduction

Zadeh [23] launched the study of FSs in 1965. Later on, Rosenfeld [20] invented the theory of fuzzy groups by using the idea of FSs in 1971. The idea of level subgroups of fuzzy group was innovated by Das [8] in 1981. Liu [13] described the fuzzy invariant subgroups in 1982. Mukherjee et.al. [18] Introduced the concept of FCSs in 1984. Bhattacharya [4] explored the considerable characterizations of FSG in 1987. Choudhury et al. [6] acquainted the persuasion of fuzzy homomorphism between two groups and investigated its effect on FSGs in 1988. Akgul [3] meditated the notion of level subgroups of FNSGs and their homomorphisms in 1988. Mashour et al. [14] discussed many important properties of FNSGs in 1990. Biswas [5] commenced the opinion of anti-FSG in 1990. Dixit, et al. [9] studied the union of FSGs in 1990. Gupta [11] developed many classical t-operators in 1991. Kumar et al. [12] explored the FNSG, fuzzy direct product and fuzzy quotients in 1992. Malik et al. [15] investigated the normality of FSGs in 1992. Filep [10] established the structure and construction of FSGs of group in 1992. Chakraborty and Khare [7] examined the behavior of the composition of fuzzy homomorphism and proved the fundamental theorem of homomorphism in 1993. Asaad



Quadrant Base Location Tracking Technique in MANET

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Abstract—Infrastructure less functioning of Mobile Ad-Hoc Network has grabbed the attention of the researcher in last few decades. Enormously beneficial in the natural phenomenon operations like flood, battlefield etc. Highly dynamic nature, restricted range of communication and rapid change in the topology of the network makes it more critical to handle. Depending upon the topology different routing protocol provides different significant benefits. Position based routing exploits nodes location for packet forwarding makes it performing significantly better than other routing protocols. Conversely, Position based Routing [2] endure from assorted security issues. In this paper proposed a Quadrant base location tracking technique in MANET and reduce the overhead of network like routing packet overhead, end to end delay. The nodes are continuously changes its location but with respect to centroid node identified the location of each node in network. The nodes are changing the coordinate then maintain the record on nodes location by that the sender is easily identified the receiver location. The proposed scheme improves the performance by reducing the overhead and provides the transparency in location identification. The modified approach increases the data receiving percentage in fast and efficient way.

Keywords—Inter Quadrant, Intra Quadrant, Movement Log, Moving Information Agent, AODV, Position Based Routing.

I. INTRODUCTION

In MANET (Mobile Ad hoc Network) existing researchers currently focus on Proactive and Reactive category of Topology Based Routing Protocols [3]. Some protocol sustain considerable amount of Routing Overhead by changing topology dynamically and number of nodes. Researchers have shown that in dense and large network [4] Position Based Routing Protocol provides significant advantages over Topology Based Routing Protocol. Control packet flooding is restricted in Position protocol by using the node location (LI). Packet forwarding is done by node on its individual position and the location of its neighbor node. The packet is forwarded to the geographically nearest nearby node [5-7]. The Global Positioning System (GPS) is a free location finding method [8] is exploits by the nodes to detect geographical position of nodes. In addition, a position service [9-11] is used by the sender to locate the destination. Each node in network maintains the location table to store the point information of other nodes. The mobile node identification w.r.t other node is also reduces the overhead of

routing. The estimate of routing is reduces the possibility of control packets flooding in dynamic network.

II. ARCHITECTURE OF PROPOSED LOCATION TRACKER SYSTEM

The main structure of our angle and location finding system is exemplified in Figure 1. It consists of six modules:

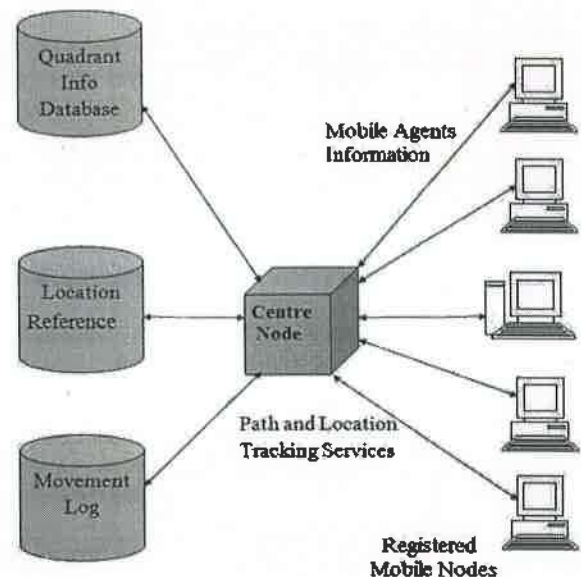


Figure 1. Architecture of Location Tracker System

1) Angle and Location Tracking Service

This service resides in the system. It serves as an Angle and Location Tracking information agent for any queries from mobile nodes or any other application. This service also manages the Movement Log of each registered node.

2) Location References from Centre Node

In our simulation we use centre node as reference node and take distance from centre node to all other mobile nodes and we also calculate angle from centre to all other mobile nodes. In our approach we divide circular area to quadrant scheme so circle divided into four different quadrants name as first, second, third and fourth.

3) Movement Log

This data is updated frequently from the mobile nodes when the new movement information is detected by the Moving Information Agent. The information of this log is



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Multimodal Biometric Attendance System

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Abstract: The most generally utilized techniques for taking attendance in the particular organization or institute is by calling the faculty members and other staff members to physically sign the attendance sheet or using biometric technique thumb reorganization machine which causes queue of faculty and the staff member and taking much more complicated situation arrived so that it was an inconvenient job for the faculties and the staff members. To overcome these daily routine issues it invents an attendance system of the staff in an organization. This invention can be deployed in any type of firm either small or large. The only need is the availability of the smart phone to every employee and availability of firm's own wireless network in their campus. It develops a smart biometric wireless attendance system which takes participation of understudy and keeping up its presence in a educational establishment without any queue and all. Now a day's everybody is having a smart phone with android operating system. In that we developed an app of wireless attendance system, which is going to be taken a daily picture of the faculty or taking the finger print mark sensor module and every impression and by using wifi it is transfer to the admin data base. Through wireless transfer system attendance reports are saved on the computer system. Toward this path, this task shows a unique finger print based biometric attendance that records the candidates consequently.

This record comprises of a unique mark sensor which is utilized to recognize the individual's distinguishing proof. For instance, for getting the participation, the understudy needs to put their finger on the unique mark sensor to get their participation. The caught unique mark is recorded instantly memory and checked each opportunity to discover whether the unique finger print matches with record in the blaze memory after which the understudy get their participation.

Key Words: Android operating system, Fingerprint sensor, Face detection technique, Zigbee and GSM Modules

I. INTRODUCTION

Now a day the attendance system exists in different places like institutions, organizations, hospitals, defense ect, both morning and the evening time sign or thumb impressions are mandatory for all the staff members. In early days, the attendances are recorded physically by maintaining the register of all the authenticated staff of the organization. It consumed more time and more man efforts, sometimes, there are several devious issues happens when a particular staff is releasing or joining the institutions attendance sheet [1]. For instance, the time duration of the organization reads the staff

name one after the other and record their presence of the staff and plays vital role for a reliable attendance system. To make the participation framework increasingly secure and reliable for affirmation, biometrics information is clubbed with finger print and face detection technique. The data privacy using FPGA are discussed in [2]. Amid enrolment, the finger impression of the staff member is caught and its extraordinary highlights removed and put away in a database. The remarkable highlights called details focuses were separated utilizing the Crossing Number (CN) strategy which removes the edge endings and bifurcations from the skeleton picture by inspecting the nearby neighborhoods of each edge pixel utilizing a 3 x 3 window.

Biometrics advances utilizes qualities, for instance, retina models, finger prints, ever raises, human faces, handprints, human voice, physically composed imprints, and so on, to check character. The other way that is taken after is the teacher passes the sheet around the class for the students to sign other than their names. Yet, these strategies have a noteworthy disadvantage where the false issues may turn out to be more continuous if the class quality is high.

An answer for defeat these issues are by utilizing a framework that will record the participation consequently.

Following are the unique features:-

- ✓ Application will be auto-start in the background at the firm-employee allotted time.
- ✓ Application will only open after auto-start when it will connect to WiFi network whose MAC address and security key will be registered on the application.
- ✓ User Face and his/her device MAC address will be binded in the database. So their will be no case of proxy attendance.
- ✓ If user left the office in between it leave time will automatically updated to the database by GPS location detection.
- ✓ Application will restart on the official leaving time of the firm to mark the leaving attendance.
- ✓ WiFi will be forgotten after the attendance being marked. This will restrains the user to have benefits of WiFi for any personal use.
- ✓ Now days, there are many advanced attendance systems are deployed in various places. Prominent of them are based upon the thumb impression. But this creates a problem in a way that there is a lot of time elapsed for a person from the campus gate to the impression machine and also time is elapsed in a way if there is long queue of people for their own attendance. Also the installation of this machine is also difficult due to economic issues for various sectors.
- ✓ Therefore, there felt a need of fast and efficient system solution that addresses above issues. We planned to distribute the attendance system into the individual devices that solves the issue of "waiting in queue". Those devices will be smartphones installed with our Application. As now a days Android runs on almost 87.5% devices (According Strategy Analytics, in the 3rd quarter of 2016) in the whole world. This availability of devices solves the "economic issues" in terms of machine installation.
- ✓ This invention is unique in terms of way it marks the attendance and identifies the user from the trivial thumb impression techniques. Talking about user identification this application uses the MAC (Media Access Control) address of the device as the unique identifier for user. Talking about the next steps of marking attendance we used the most emerging technology, Face Recognition that will mark the attendance.
- ✓ All the services will be deployed over the servers so user can't able to manipulate the technical features of the application for its own benefits.
- ✓ Application will automatically mark the user as late if the user will not make the office on time.

II. LITRATURE SURVEY

1. According to Chatrati Sai Krishna, Naidu Sumanth, C. Raghava Prasad, They proposed student attendance and tracking system based on RFID. This research paper presents that India has several of government as well as private educational colleges are important actions providing employment to persons which are working there. So today large number of institutes of rural area as well as metropolitan places are facing frequent difficulty like absentees the institute lectures furthermore meet with the unauthorized ways. All education offices also needs to keep up databases of all the students, teaching and non teaching employees, that is very hard to uphold. This research describe a wireless development model for keep up the documentation of all the students, staff member described as RFID is used for Attendance and track all the records of in time and out time among GSM Module safely supplying the requirement of various organizational staff.



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Third International Conference on Computing and Network Communications (CoCoNet'19)

Modified LDA Approach For Cluster Based Gene Classification Using K-Mean Method

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Role of gene expression in cancer and cellular process is a complex problem that continues to haunt and challenge researchers. Sheer number of genes and inter related biological processes make the process of identifying more complex. Gene classification and analysis is a very difficult task for data scientists, as it requires various data, information and facts for making different quality articulation. Latent Dirichlet Allocation (LDA) has shown its compatibility for investigation and quality articulation in solid and malignant growth tissues. LDA is used to connect or grouping of genomic data and results are subsequently used for investigation. This work proposes A Modified Latent Dirichlet Allocation (MLDA) for gene classification and achieves quality articulation. The proposed MLDA identify and group differentially expressed genes between healthy and cancer tissues of various types. Experimental results report better performance of MLDA as compared to current state of art methods over Breast and Lung cancer data sets.

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Peer-review under responsibility of the scientific committee of the Third International Conference on Computing and Network Communications (CoCoNet'19).

Keywords: Machine learning; Topic Modeling; Classification, LDA

1. Introduction

Malignant cell growth is the second driving reason for death universally, and amounts for an expected 9.6 million deaths in 2018. All inclusive, around 1 out of 6 deaths are due to malignant growth. 70% of deaths that happen due to malignant cell growth are reported in low salary nations. Diseases causing contaminations like hepatitis and human papilloma infection (HPV) are in charge of up to 25% of malignant cell growth cases and cancer is a main single reason for deaths around the world. Table 1 and Table 2 list number of cancer cases and total number of deaths due to cancer. Table 2 reports around 9.6 million deaths in 2018.

Table 1: Number of cancer cases

Type of cancers	Number of Cases
Lung	2.09 million cases
Breast	2.09 million cases
Colorectal	1.80 million cases
Skin cancer non-melanoma	1.04 million cases

Table 2: Number of deaths due to cancer

Type of cancer	Number of Cases
----------------	-----------------


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Text Message and Digital Image Secure for Discrete Shearlet Transform

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Abstract—"Steganography" is a strategy that defeats unapproved clients to approach the critical information, to imperceptibility and payload limit utilizing the diverse system like discrete cosine transform (DCT) and discrete shearlet transform (DST). The available methods till date result in good robustness but they are not independent of file format. The point of this exploration work is to build up an autonomous of record organize and secure concealing information conspire. The independent of file format and secure hiding data scheme is increased by combining DST and least significant bits (LSB) technique. In like manner a proficient plan is produced here that are having better MSE and PSNR against various characters.

Keywords—Discrete Shearlet Transform, Singular Value Decomposition, Peak Signal to Noise Ratio, Mean Square Error, Discrete Cosine Transform, Least Significant Bit

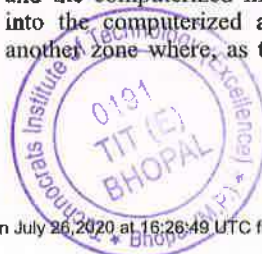
I. INTRODUCTION

Recent growth of digital image content over internet has expanded the requirement for the security of advanced media. The image transmitted through internet and wireless communication channels can suffer various threats. One of the major threats is the threat of confidentiality. This threat represents the possibilities of accessing the audio data via unauthorized channels. Another issue is the threat of integrity, where the resource can be altered, by unauthorized entities, without any detection. Threat of availability is possession of a confidential audio content through some illicit channels. Various other threats include replication of digital data without any information loss and manipulations of the same without any detection. A feasible solution is required, for telecommunication, consumer electronics and information technology industries, to provide secure transmission of content without sacrificing their security rights [1]. Emerging technologies for sound security has three primary targets: secure substance transmission, validation of sound data and duplicate control to shield sound information from illicit conveyance and burglary [2]. In present day times, the conventional paper media is being supplanted with its computerized forms for picking up the benefit of maintaining a strategic distance from extensive capacity and safeguarding prerequisites, while making data effectively accessible for a bigger number of clients. When the beneficiary approves and unscrambles the information, the item can be thusly taken from any substance

recognizable. The word steganography was originated from Greek which means covered writing. Steganography is the oldest form of covert channel. This may prompt further duplication and re-appropriation leaving the rights holders weak and sovereignty less [3]. To enhance the security of audio data, digital watermarking and steganography techniques complement cryptography for protecting content even after it is deciphered [4]. The study of multimedia security [5] therefore includes not just encryption but also watermarking and steganography. Steganography and Watermarking almost interchangeably, refers to hiding secondary information into the primary multimedia source. The primary multimedia sources can be audio, image, and video. There are unique techniques associated with each type of primary perceptual sources depending on their inherent redundancy and perceptual properties. These techniques have practically all business and private associations are presently moving towards 'paperless' office, where basic office gadgets, [6]. In this thesis work the primary multimedia source is image.

Advanced watermarking is a procedure to insert mystery data into a picture. A watermark is an example of bits embedded into picture information that serves to recognize the document's security data (creator, rights, mystery message, and so forth [7]. The name "watermark" is gotten from the faintly obvious imprints engraved on hierarchical stationery. Dissimilar to printed watermarks, which are expected to be to some degree noticeable, the vast majority of the computerized watermarks are intended to be totally imperceptible. What's more, the bits speaking to the watermark must be dissipated all through the document so that they can't be recognized and controlled [8]. The inserting system must keep the first data perceptually unaltered and the watermark information ought to be distinguished by an extraction calculation.

The fundamental point of watermarking is to give powerful watermarking (copyright assurance) and delicate watermarking (content confirmation). A third kind of watermarking procedure that is getting to be famous is the "Biometric Watermarking". Biometric Watermarking is a procedure that makes a connection between a human subject and the computerized media by implanting biometric data into the computerized article [9]. Data stowing away is another zone where, as the name proposes, short messages





Dr Yogadhar Pandey

Detection and prevention of wormhole attack using the trust-based routing system

Authors Aditya Bhawsar, Yogadhar Pandey, Upendra Singh

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Description As the configuration used for the Mobile Ad hoc Networks (MANET) does not have a fixed infrastructure as well, the mechanism varies for each MANET. The finding of the route in this mechanism also varies because it does not have any fixed path route for routing as well every node in this structure behaves like a base station. MANET has such freedom for its creation, so it also faces various types of attacks on it. Some of the attacks are a black hole, warm hole etc. The researchers have provided various methods to prevent warm hole attacks, as the warm hole attack is seen as difficult to prevent. So here a mechanism is proposed to detect and prevent the warm hole attack using the AODV protocol which is based on trust calculation. In our method, the multiple path selection is used for finding the best path for routing. The path is tested for the warm hole attack, as the node is detected the data packet sent in between ...

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Four Notch Dual Band Micro-strip Patch Antenna for S-C Band Application.

Sonu Kumar Mathuri *PG Scholar*, Dr Abhishek Bhatt *Professor*, Prof Saima Khan *Assistant Professor*, Prof Sandeep Shukla *Assistant Professor TIT E Bhopal*

Abstract- In this paper S -Band and C-Band antenna has been design using shorting pins, via hole and meander type ground plan. The inductance of the geometry is optimized in this paper. The Analytical models are used for modeling of the antenna. The measurement shows Operating Impedance bandwidth achieved in S and C Band. Obtained 8% operating impedance bandwidth in S-Band and 24% operating bandwidth where $|S_{11}| < -10$ dB are obtained,. Obtained four operating notches at four operating frequencies 2.25GHz, 2.6GHz, 3.3GHz and 4.4GHz Where return losses obtained -15dB, -25.5dB,-16dB and -31dB, respectively. This antenna can be effectively use in5G sub 6 GHz and Bluetooth and Wi-Fi bands.

Index Terms

Orthogonal Shorting pins, inverted U-Slot, Square Slot, Meander shape ground plan, 5G sub 6 GHz

I. INTRODUCTION

The new mobile communication like fifth generation (5G) communication technology is adopted in many countries like US, Japan. But for enhancing data rate, beam focusing, multiple polarization bandwidths and wide and dual band operating bandwidth new antennas are demanding in today's technology with attractive features. The Micro-strip patch antenna has many attractive like small size, low fabrication cost, flexible in installation and high quality factor due to all the features Micro strip antenna is preferable for 5G Communication technology. In spite of advantages micro-strip patch antenna face some limitation like narrow operating bandwidth. Many techniques have been used in past decades to improve the operating impedance bandwidth like Asymmetric Loop Resonator [1], Out-of-Phase Coupling approach

[2], Mutual Coupling Reduction [3], Slit, Strip, and Loop Loading Techniques [4], Parasitic patches [5], Slit Loaded Gap coupled Orthogonal shorting Post [6], Hybrid Modeling [7], E-Shape patch [8], radome effect [9], using U-Slot radiator [11-12], the review of compactness and broadness has been presented in [10]. Compact eight-element MIMO array antenna was proposed in [12] using gap-coupling techniques and gives 3.5-GHz, -10dB, impedance bandwidth. Similar mirrored asymmetrically structure is adopted in [13], which provides dual-band at 3.5 and 5.8GHz frequencies. T-shaped slot elements were adopted in [14], recently various decoupling techniques were preferred in 5G technology [15]-[18] and also used some numerous techniques like inherent decoupling structure [19-20], grounded strips [21], neutralization line [22], [23], pattern diversity [24] and. balanced slot mode [25].

III. DESIGN CONSIDERATION

The propose antenna constructed on FR-4 Substrate, for operating over dual band and at four notch frequencies the inverted two U-Slot, square slot meander type ground plan has been used in the geometry. The slotting in the antenna geometry has been applied by impedance matching method. The inverted U-Slot, square slot meander shape ground plan has generated different operating frequencies, the vertical arm generates low frequencies and a horizontal arm generates higher frequencies. The combination of vertical and horizontal arms provides band of frequencies so that the design antenna are operating over S and C - Band frequencies spectrum.



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Reconfigure 5G sub 6 GHz and Wi-Fi bands Micro-strip Antenna using hybrid slotting and mix substrate material techniques

Nusrat Praween PG Scholar, Prof Shivendra Singh, Prof Saima Khan.

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Abstract - In this paper Dual Band Multilayer Micro-strip antenna using LTCC (Low Temperature Ceramic co-efficient) and FR-4 materials for C-X- Band applications has been designed. The Proposed antenna is designed using two C type Slot inserted in top layer patch and five vertical slots design on middle patch. The properties of two materials LTCC and FR-4 substrates have been mixed to improve the radiation characteristics and return loss of design antenna from 4 to 6GHz. This antenna is used to improve the return loss and operating impedance bandwidth. The impedance bandwidth $S_{11} < -10\text{dB}$ achieves 34% of C-Band from 4.1 to 5.8 GHz and can be used in Wi-Fi bands and 5G sub 6 GHz. The Axial ratio bandwidth achieved $< 1\text{dB}$, so that design antenna included circular polarization characteristics from 4 to 6GHz. This proposed design provided return losses from -10dB , to -52 dB . In this work has been simultaneously improved impedance bandwidth and axial ratio bandwidth. The linear and circular directivity has been improved simultaneously.

Index Terms— 5G sub 6 GHz, Hybrid material, Hybrid slotting techniques. Beam forming

I. Introduction

When the fifth generation (5G) technology is upcoming technology wireless communication system in many countries. The antenna design for 5G technology is on most demanded for the latest wireless applications, such as multimedia devices, mobile communication, satellite communication, internet of thing, advanced wireless systems and so on [1]–[3]. Broad band beam focusing antenna for 5G sub 6 GHz WiFi communication systems and have many possibility of upcoming research in the field of 5G Micro-strip Patch antenna in terms of

compactness and broadness. However, a in today exists Micro-strip patch antenna has many limitation of less operating bandwidth, axial ratio bandwidth and impedance bandwidth cannot improve simultaneously.

In paper [2] discussed about the out of pass coupling concept for improving the operating bandwidth. In [3] presented varies methods to improve the operating impedance bandwidth. The optimization technique of Micro-strip patch antenna discussed in [4] using parasitic patch array concept. Multilayer Slit Loaded Gap coupled Orthogonal Shorting Post technique had been used in Micro-strip Antenna to improve L-Band operating bandwidth [5]. some researchers has used Hybrid Modeling [6], E-shape Micro-strip patch [7], Radome effect [8], Mutual Coupling Reduction [9], Slit, Strip, and Loop Loading Techniques [10], U-Slot [11–14], V-Slot these techniques have been used to improve the operating bandwidth of antenna. Other more interesting techniques have been invented to enhance the operating impedance and axial ratio bandwidth, by stacked patches geometry [16], parasitic resonators [17], and capacitive coupled feed technique [18], in today scenario most prefer technique was meta-material, meta material is a artificial material is used to reconfigure the electrical parameters of design antenna and significantly improve the operating impedance bandwidth [19]–[20]. In some papers included electromagnetic band gap for further enhancement of the operating impedance bandwidth of antenna. In this work has been simultaneously improved impedance bandwidth and axial ratio bandwidth. The linear and circular directivity has been improved simultaneously.



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Secure and Success Rate of Packet for WSN using Leach Cluster Head Fuzzy Logic

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Abstract- In spite of the fact that restriction assumes a significant job in every one of the frameworks, it is a difficult issue because of constrained assets accessible at every sensor hub. Vitality protection in remote sensor hubs is prime worry in most of its applications. This gets significant as increment in the system lifetime relies mostly upon limiting the vitality utilization in sensor hubs. In this manner rationing and adjusting the vitality utilization is of most extreme significance. Fundamental test in a remote sensor arrange is to plan calculations with least vitality consumption. These grouping systems are utilized to frame the groups in the system which assists with using the vitality effectively that thusly drags out the framework lifetime. In this work, the level of the hub has additionally been considered for the calculation of bunch sweep as an upgrade of the current work. The significant bit of leeway of this proposed work on inconsistent bunching utilizing fluffy rationale is that it expands the framework lifetime by decreasing the term of problem area issue.

Keywords— Wireless Sensor Network (WSN), Fuzzy Inference System (FIS), Packet Delivery Ratio, Secure Rate

I. INTRODUCTION

The expanded utilization of remote sensors these days over the world is because of the reasons like simplicity of execution (no long links), capacity to work in an assortment of conditions, simple investigating and fix, and elevated levels of execution. WSN is an foundation contained countless compact, brilliant sensors able of performing detecting or control functionalities, calculation and correspondence tasks and are organized through remote connections [1]. WSNs are groundbreaking in supporting a wide scope of potential applications to industry, science, transportation, common framework and security. WSN can be considered as a unique sub-class of specially appointed systems. Any system with no framework support for systems administration is a specially appointed organize. WSNs are impromptu systems of sensors gathering tactile data for applications that need notice and a suitable reaction [2]. The topology of a remote sensor organize changes as often as possible. Sensor hubs in WSN predominantly use communicate correspondence ideal models while most conventional specially appointed systems depend on highlight point correspondences. MANETs are normally near people, so that most hubs in the system are gadgets that are utilized by people (e.g., smart phones, versatile radio terminals, and so forth.) though sensor systems center around association with nature. Both WSN and specially appointed arrange are disseminated remote systems and the way that steering between two hubs may

include the utilization of middle of the road hand-off hubs (known as multihop steering). Both impromptu and sensor hubs are battery-fueled and use a remote divert put in an unlicensed range. Self-administration is vital in light of the circulated idea of the two systems [3].

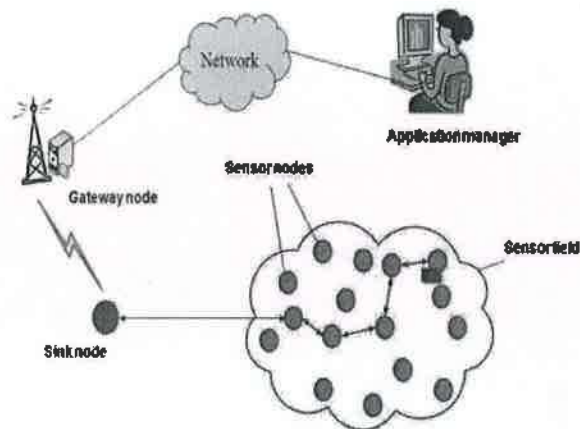


FIG. 1: WSN

II. WIRELESS SENSOR NETWORK

Changing existing messages: This activity undermines respectability of messages. It confounds or deceives the gatherings associated with the correspondence convention, for example by changing announced sensor readings, or by adulterating steering control parcels, making vitality be squandered on wrong steering. **Manufacturing bogus messages:** By creating bogus messages credibility of the messages is upset by revealing bogus sensor readings, or by spreading counterfeit directing mistakes, making vitality be squandered on incorrect steering. This activity can likewise encourage DoS assaults, by flooding the system, in the expectation of overpowering it with counterfeit messages [4].

Replaying existing messages: The freshness of the messages is influenced by this assault. The clients are made not time-mindful and can be utilized for man-in-the-center assaults against cryptographic conventions, and if the assaults are fruitful, would prompt the infringement of classification, respectability and legitimacy, and even assistance accessibility.

Straying from convention: If the aggressor needs to increase an uncalled for utilization of the transmission medium by not setting a non-zero dispute break (which doesn't include interfering, blocking, adjusting, creating or replaying any message), its neighbors would keep from



Ethics of Cyber Security & Cyber Laws

(As Per R.G.P.V Bhopal (M.P.) Syllabus for CSE & IT Students)

DR. RACHANA KAMBLE



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An Energy Efficient and QoS Achieved Through MapReduce in Cloud Environment

[Sandeep Rai](#) , [Aishwarya Namdev](#), [Praneet Saurabh](#) & [Rajesh Boghey](#)

Conference paper | [First Online: 02 November 2019](#)

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Abstract

This paper presents an energy-efficient and quality of service achieved through MapReduce in cloud environment. Although decrease in operating costs residue to be a key desire for movement to Cloud environments, Power consumption is a big thing for data centers and cloud service providers. Many big data applications execute on Hadoop MapReduce framework for handling large workloads. Cloud



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DPLPLN: Detection and Prevention from Flooding Attack in IoT

Publisher: IEEE Cite This PDF

Apeksha Gajbhiye ; Devkant Sen ; Abhishek Bhatt ; Gaurav Soni All Authors

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Abstract

Abstract:

Security is the major concern in IoT communication because nodes are communicating with each other and sharing a lot of information through RPL routing. The malicious node in IoT is very harmful because these nodes are degrading the routing performance and also its presence consumes the network resources like bandwidth and nodes processing capability. In this paper, A Detection and Prevention Low Power and Lossy Network (DPLPLN) scheme is proposed to secure IoT communication. The DPLPLN is

Document Sections

1. Introduction



Security Issues in IoT



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Analysis of Underwater Wireless Communication using Visible Light LEDs

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Abstract: - Underwater communication (UWC) with multi-hop techniques utilizes sensors to convey information to the sink/sonobuoy, which is situated on the top surface of the sea. The down to earth motivation to arrive at the sea surface is, it has higher proliferation speed. The electromagnetic and optical correspondence has high recurrence in submerged condition, along these lines it makes higher constriction coefficient with its particular separation. To conquer this confinement, the acoustic correspondence is joined in submerged condition. Acoustic correspondence has insignificant weakening and vitality utilization in submerged condition. Versatility of sensor hubs is expected to sea flows, which innately causes correspondence void. Because of this, sensor hubs can't speak with other sensor hubs. The correspondence void because of versatility issue prompts finding a legitimate recuperation hub. In this paper the studied of OFDM-MIMO system using visible light LEDs technology is presented. Receiver power, channel gain, output signal and signal to noise ratio is measure with variation of the surface of the light.

Keywords: - OFDM, MIMO, Visible Light, LEDs, Underwater

I. INTRODUCTION

UWC arrange contemplates have become a prime region of research, as about 70% of our reality is secured with ocean, waterway what's more [1]. The exploration in submerged remote UWC has developed fundamentally in the ongoing decade. These examines have served to proficiently impart among submerged hubs also, conventions. Submerged acoustic correspondence applications have experienced huge development in regions, for example, gas extraction, military, business, checking CO2 stockpiling, sonar, minefields, voice correspondence, hydrographic reviews, oceanographic studies and marine life explore, to give some examples [2]. Every one of these applications are conceivable, when the submerged remote systems channel is proficiently planned, and its exhibition is observed [3].

So as to structure such productive submerged correspondence frameworks, a careful comprehension of the idea of the physical boundaries compelling the exhibition in the correspondence, should be very much contemplated [4]. Acoustic signs are basically used to impart in a submerged domain. Powerful acoustic

correspondence happens just when the acoustic collector comprehends the definite message transmitted by the acoustic transmitter.

Correspondence in a submerged acoustic medium is trying due to the impacts of; signal blurring, multipath spread, restricted transfer speed, recurrence also, time selectivity [5].

Blurring alludes to the contortion that a bearer adjusted correspondence signal encounters over certain spread media. To show the submerged remote correspondence channel productively, the above parameters are taken into contemplations and demonstrated utilizing suitable numerical apparatuses. Due to the time changing nature in submerged remote correspondence, blurring channels may must be demonstrated utilizing non-deterministic assistance ensures. And afterward, these models are mimicked utilizing important test systems furthermore, broke down for execution and consistence.

Present day submerged system principally conveys information traffic that is imparted through bundle exchanged systems.

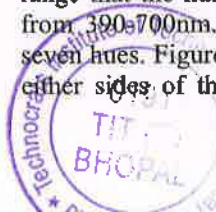
Parcel exchanged submerged systems are expanding in unpredictability because of its use, applications, heterogeneity and administration desires [6]. This brought about the requirement for growing new scientific models that intently speak to this complex submerged system.

In this examination, the fundamental point is to manufacture a lot of numerical models for submerged acoustic channel blurring utilizing stochastic system math. These models are then mimicked and tried for consistence, execution and pertinence.

India is encompassed on every one of the three sides by the seas, for example, Arabian Ocean, Bay of Bengal and the Indian Ocean. This gives chances to various submerged remote applications. In the previous 4-5 years, submerged remote correspondence look into in India has risen in the applications for example, marine barrier, submerged checking, expectations of typhoons, military, target discovery and following, oceanographic information assortments, finding ocean assets, debacle anticipation, and different other business applications.

II. VISIBLE LIGHT SPECTRUM

Visible light spectrum (VLS) is a piece of electromagnetic range that the human eye can see. Its wavelength ranges from 390-700nm. The range of VL is nonstop and has seven hues. Figure 1 shows the range of obvious light. On either sides of the range exists Ultraviolet and Infrared.



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Hybrid Text Illusion CAPTCHA Dealing with Partial Vision Certainty



Arun Pratap Singh, Sanjay Sharma and Vaishali Singh

Abstract The term CAPTCHA was introduced as the Turing test that claims to classify human and robot which may intend to intervene in the security traits of a database. CAPTCHA stands for "Completely Automated Public Turing test to tell Computers and Humans Apart." CAPTCHA has been represented in various customs such as distorted texts, 3D texts, audio, graphical, gaming and many more. The recent approach is gaming CAPTCHA which is a bit heavier for the server to load over a browser. The logic behind the gaming CAPTCHA is dealing with dragging and dropping object to the target position which does not belong to the hard AI problems. Gaming CAPTCHA is a time-consuming and complicated approach which confuses users to deal with the games. Turing test or CAPTCHA should be as easier as possible for human and almost impossible for bots. Here the proposed system is able to provide a new challenge of CAPTCHA in front of users that forms a hybrid text illusion which only deals with human's partial vision certainty. Hybrid text illusion signifies that a word observed by normal eyes actually gets differ from partially opened eyes. A user is required to recognize the partial one which is not possible with normal eyesight even a robot is not able to recognize by using any kind of text scanning approaches. It is a new generation CAPTCHA which creates illusion where only human can deal with.

Keywords CAPTCHA · Hybrid text illusion · Gaming CAPTCHA · Partial vision · Text recognition

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Chapter 40

A Novel Method for Corona Virus Detection Based on Directional Emboss and SVM from CT Lung Images



Arun Pratap Singh, Akanksha Soni, and Sanjay Sharma

1 Introduction

COVID-19 is a family of Severe Acute Respiratory Syndrome (SARS) as CoV-2. Till 1-May-2020, even more than 3.26 million people have been positively reported across 187 countries as well as territories, which resulted in more than 233,000 deaths and more than 1.02 million cases have been recovered. The lungs are the most affected organ due to COVID-19 because of this virus admittance host cells via enzymes. This virus also affects the gastrointestinal organs that indirectly affect the small intestine [1]. It has been named coronavirus because it looks like halos (also known as coronas) while having viewed through a microscope. Figure 1 shows the virion compositional structure that showing spikes as a “crown” [2].

The virus is mainly spread among people during close contact, often through droplets or sneezing. People can also be infected by coming in the contact with contaminated surfaces and then touching their faces. It is the most contagious especially during the first three days, although symptoms of the disease may appear and spread in later stages of the disease. Chest CT imaging is a helpful technique for diagnosis. Figure 2 shows the common symptoms of coronavirus-infected people and biological changes in the human body.

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Analysis of Vehicular Pedestrian Interaction at Urban Undesignated Mid-block Sections



Hareshkumar Dahyabhai Golakiya, Manish Patkar and Ashish Dhamaniya

Abstract In the present study, the interaction between vehicle and pedestrian crossing at the undesignated mid-block location is assessed. The traffic survey is conducted at thirteen urban mid-block sections in three heavily populated and fast-growing cities of India. To study the interaction between vehicle and pedestrian, speed of vehicles has taken a prime variable and the effect of pedestrian crossing on vehicle speed has been assessed. The speed reduction in individual category of vehicles due to pedestrian crossings has been determined. Considering the fact that speed is linearly related to density, speed models are generated for section without side friction (base section) and with pedestrian crossing (friction sections) for six-lane urban arterials. The result shows that for the given traffic volume and proportion of traffic mix speed at friction section significantly reduces as compared to the base section. The study is useful for the designer for designing traffic facility as HCM keeps mum in such a traffic condition.

Keywords Pedestrian · Speed · Mid-block · Interaction · Base section · Friction section

1 Introduction

Traffic rules violation or following the traffic rules partially are common phenomenon found in developing countries which mostly leads towards unsafe traffic operation. If all the traffic rules are followed strictly by road users, theoretically there will not be any road crash. However, many other reasons are also there like the failure of the vehicle operating system, carelessness of the driver, use of alcohol, etc. But most of

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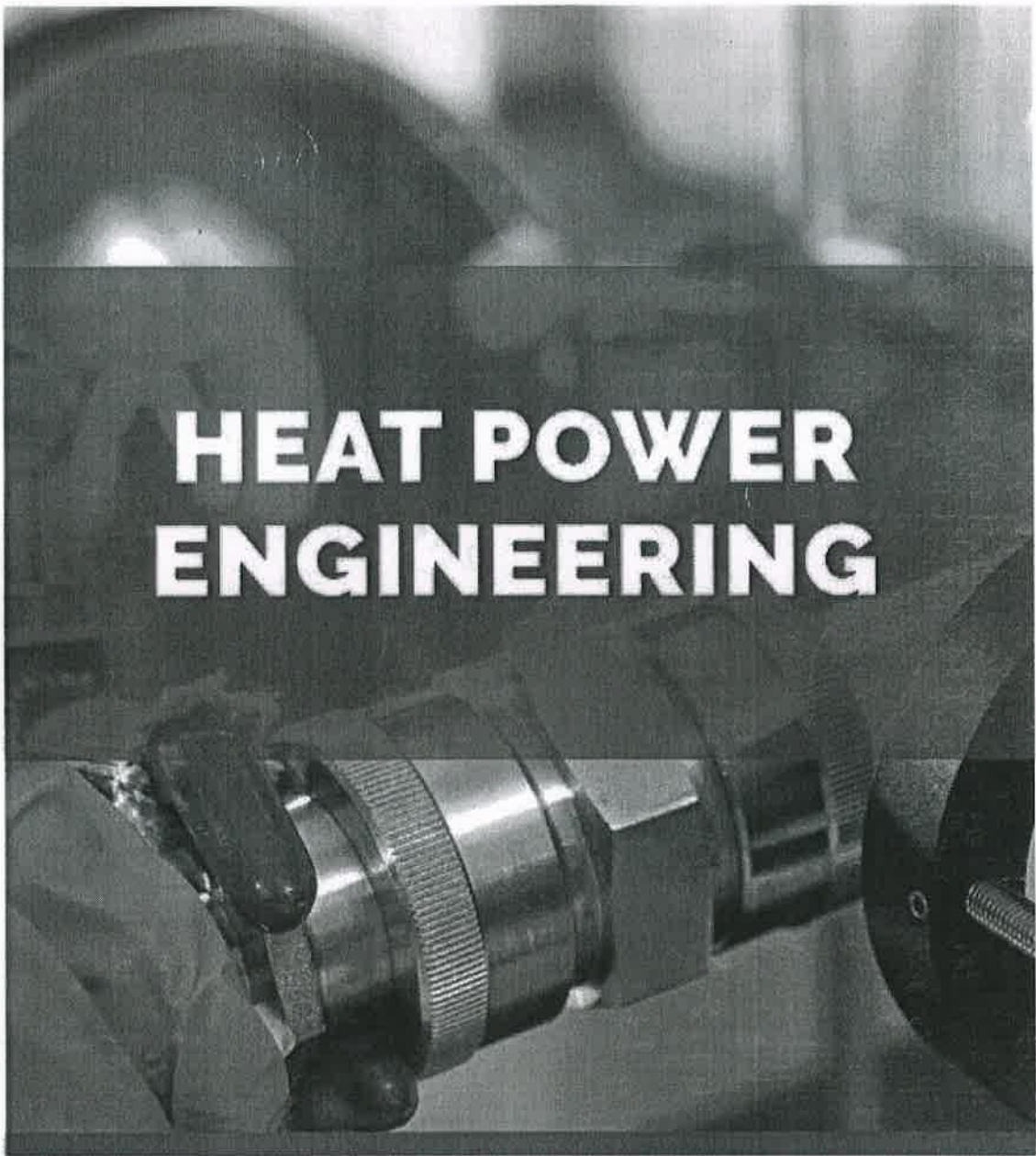
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HEAT POWER ENGINEERING



**Dr. PRASHANT GEETE, Dr. MANISH JOSHI,
Dr. S. KALIAPPAN, Mr. RAJA RAJU**



(Scientific International Publishing House)



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Low BER and High Throughput of NOMA for 5G Systems with Linear Power Amplifier

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Abstract: - Investigating NOMA for customary downlink and uplink structures, the use of NOMA is inspected in downlink multiuser various data diverse yield (MIMO) systems, by proposing a novel MIMO-NOMA model with direct beamforming strategy. In this MIMO-NOMA system, customers' get accepting wires are continuously gathered into different disjoint packs, and inside each gathering a lone bar is shared by all the get gathering devices those grasp NOMA. The pervasiveness of the proposed model is spoken to through wide execution appraisals. Finally, the use of encouraged multi-point (CoMP) transmission method is inspected in downlink multi-cell NOMA structures, considering spread control task at each telephone. In the proposed CoMP-NOMA model, CoMP transmission is used for customers experiencing strong get signals from various cells while each telephone self-governingly gets NOMA for resource assignment. The pertinence and fundamental conditions to use assorted CoMP plans are perceived under various framework circumstances, and the relating throughput conditions are resolved. The loathsome capability increments of the proposed CoMP-NOMA model are furthermore assessed.

Keywords: - NOMA, Fifth Generation, Spectral Efficiency, 5G Wireless System

I. INTRODUCTION

To ensure the viability of compact correspondence benefits in the coming decades, new advancement courses of action are being searched for the fifth period (5G) and past 5G (B5G) cell systems. In the point of view on the predicted exponential improvement of compact traffic, these advances are depended upon to give basic gains in the spooky efficiency (and thus structure limit) and improved nature of customer experience (QoE).

In this exceptional circumstance, non-even various passage (NOMA) is considered as a promising different access development for 5G structures. By arranging various customers over same range resources anyway at different power levels, NOMA can yield a vital supernatural capability gain and redesigned QoE when appeared differently in relation to standard even extraordinary access (OMA) structures.

The basic principle of NOMA is to at the same time serve different customers over same range resources (for instance time, repeat, code and space) yet with different power levels, to the weakness of inconsequential between customers check

[1]. Rather than customary balanced various passageways (OMA), where every customer is served on exclusively assigned range resources; NOMA superposes the message indication of different customers in power region at transmitter end(s) by abusing the customers' different channel gain [2]. Dynamic check repeal (SIC) is then associated at the beneficiary (s) for multiuser area and interpreting. For a model, let us consider a downlink NOMA transmission where the base station (BS) plans m customers over a comparative range resources B . Let moreover acknowledge that the message signal for i -th customer is s_i where $E[|s_i|^2] = 1$, and transmit power is p_i . By then the superposed sign at transmitter end could be imparted as:

$$X = \sum_{i=0}^m \sqrt{p_i} s_i \quad (1)$$

Where $\sum_{i=0}^m p_i \leq p_t$ for BS all out transmit power spending

plan of p_t . Then again, the got sign at i -th client end could be communicated as:

$$y_i = h_i X + w_i \quad (2)$$

Where hello is the multifaceted channel gain between customers I and the BS. The term w_i demonstrates the beneficiary Gaussian racket including the between cell impedance at the I -th customer's authority [3, 4].

II. ADVANTAGE OF NOMA

High range proficiency: Range capability is one of the especially recognized show estimations in remote frameworks. NOMA demonstrates a high extend efficiency to improve the all-out structure throughput, which is credited to the manner in which that NOMA licenses one resource square (RB) (e.g., time/repeat/code) to be included by different customers [5].

Reasonableness throughput tradeoff: One key component of NOMA is to convey greater ability to the weak customer, which isn't equivalent to the standard control task (PA) procedures, for instance, water filling PA1. Therefore, NOMA is prepared for guaranteeing a respectable tradeoff



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Design Area-time Efficient Pipeline Architecture for Finite Impulse Recursive System

Publisher: IEEE

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Khushboo Chourasiya ; Saima Khan ; Shivendra Singh All Authors

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Abstract

Abstract:

The paper aims in developing a finite impulse response filter architecture that relies on the multipliers to overcome the shortcomings in the prevailing method and heighten the speed of the filters by employing the adders. The algorithm of the Vedic multiplier is generally utilized for the applications of higher bit length over the lower order bits used with the ordinary multiplier. The Vedic multiplier and the ordinary

Document Sections



Introduction



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Security for Digital Image and Text Message with Steganography and Watermarking Technique

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1 55
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Abstract

Abstract:

In the normal feeling of the world, the word 'security' signifies the condition of being safe and the measures taken to guarantee security. In any case, wellbeing isn't an objective or an outright thing in light of the fact that regardless of utilizing a considerable lot of the security systems accessible there is no 100 percent security. Individuals have been making and utilizing numerous wellbeing strategies since

Document Sections

Introduction




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Cryptography and Network Security

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Highlights

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Analysis of Customer Churn Prediction in Telecom Sector Using CART Algorithm



Sandeep Rai, Nikita Khandelwal and Rajesh Boghey

Abstract Predicting client churn in telecommunication industries becomes the most significant topic for analysis in recent years. Because its helps in detecting which customer are likely to change or cancel their subscription to a service. Analysis of information that is extracted from telecommunication companies will help to seek out the explanations of client churn and also uses the knowledge to retain the purchasers. Thus, predicting churn is extremely necessary for telecommunication firms to retain their customers. During this paper, we have designed the classification model using call tree, evaluated the performance measures, and compared its performance with logistic regression model.

Keywords Classification · Churn prediction · Telecom data · Logistic regression model · Customer retention · CART algorithm

1 Introduction

Data mining strategies lie at the intersection of computing, statistics, and machine learning info systems. Data processing techniques help in building the prediction models to get future developments and actions permitting the organizations to require good selections derived from the data from knowledge [1].

Churn prediction is associate application of client performance in data processing. Churn [2] could be a key issue sweet-faced through associate enterprise associated denoted the value of extending a replacement client is almost five times more than the value of maintaining an recent client. As a result of the fight of the enterprise market

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Volume 13, Issue 9, December 2009, Pages 2245-2262



A review of renewable energy technologies integrated with desalination systems

Mohamed A. Eltawil^{a,b}  , Zhao Zhengming^c, Liqiang Yuan^d

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Abstract

Energy is an essential ingredient of socio-economic development and economic growth. Renewable energy provides a variable and environmental friendly option and national energy security at a time when decreasing global reserves of fossil fuels threatens the long-term sustainability of global economy. The integration of renewable resources in desalination and water purification is becoming increasingly attractive. This is justified by the fact that areas of fresh water shortages have plenty of solar energy and there

Design Area-time Efficient Pipeline Architecture for Finite Impulse Recursive System

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Abstract- The paper aims in developing a finite impulse response filter architecture that relies on the multipliers to overcome the shortcomings in the prevailing method and heighten the speed of the filters by employing the adders. The algorithm of the Vedic multiplier is generally utilized for the applications of higher bit length where the lower order bits work well with the ordinary multiplier. The Vedic multiplier and the ordinary multiplier is integrated to develop a multiplier of higher speed for an applications with the higher bit length. The bits of the remainders are eluded to reduce the issues faced in the prevailing architecture. The proffered algorithm is implemented using the Xilinx software Vertex-7.

Keywords – FIR Filter, Multiplier-less, Common Boolean Logic Adder, Xilinx Software

I. INTRODUCTION

Advanced signal handling (DSP) is viewed as one of the most dominant innovations of the twentieth century. Fitting amalgamation of modern calculations, numerical details and their effective usage has built up DSP as one of the promising regions in the present century. It is properly foreseen as an integral factor to shape the science, building and innovation of the present age by different researchers all through the globe. Computerized channels, specifically, structure the foundation of this DSP engineering what's more, consequently the general execution in any DSP condition is to a great extent impacted by the attributes of those channels. Truly, the zone of advanced channel configuration has gotten defended consideration from the scientists for over 40 years. As to this, researchers have attempted to deliver various ascribes relating to these channels while presenting their suggestion. Decreasing the equipment multifaceted nature of electronic circuits/structures has been developing as one of the difficult assignments in the present time. In association with this, researchers from the DSP network had communicated their worries and in this way have concocted positive arrangements. Remembering this, plan of equipment proficient computerized channel had additionally been given fitting consideration and a large number of such investigate articles might be found from the significant writing. One such prominent methodology is to speak to the channel coefficients as total of marked powers-of-two with the goal that the activity of duplication can just be completed by methods for moved increments as well as subtractions as it were. To the extent the structure of SPT

channel is concerned, the essential task has been the fitting choice of those coefficients from a characterized search space with some given imperatives.

Plan of equipment proficient multiplier based FIR computerized channel has been accomplished by different implies throughout the most recent couple of decades. A lot of promising approaches had been presented by a few analysts who may extensively be ordered into five particular fragments. This has been expressly portrayed in the following section. As detailed in the writing, structure of equipment effective advanced channel has as of late been tended to by a few bio-propelled enhancement strategies of current intrigue. In addition, specialists have given legitimate consideration in creating able coefficient portrayal conspired for the FIR channels. Remembering these perspectives, essential targets of the proposition are condensed beneath:

- Selection of some vigorous enhancement strategies for the productive structure of multiplier-less FIR channel.
- Appropriate detailing of the target or wellness work relating to the structure procedure viable.
- Evaluation of channel execution both as far as recurrence qualities and equipment unpredictability.
- Implementation of the planned channel on continuous equipment to approve its productivity in wording of zone just as power.
- Extending the rule of plan methodology in multiplier-less picture channel structure and to assess its exhibition in any appropriate application zone.
- Proposition of another portrayal conspire for the tap coefficients of multiplier-less FIR channel which may yield significantly more equipment proficient multiplier structure.

II. MULTIPLIER-LESS TECHNIQUE

Appropriated number-crunching is a significant calculation for DSP applications. It depends on somewhat level improvement of the duplicate and amasses activity to supplant it with set of expansion and moving tasks. The fundamental activities required are an arrangement of table queries, augmentations, subtractions and movements of the info information succession. The LUT stores all conceivable incomplete items over the channel coefficient space.



Security for Digital Image and Text Message with Steganography and Watermarking Technique

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Abstract— In the normal feeling of the world, the word 'security' signifies the condition of being safe and the measures taken to guarantee security. In any case, wellbeing isn't an objective or an outright thing in light of the fact that regardless of utilizing a considerable lot of the security systems accessible there is no 100 percent security. Individuals have been making and utilizing numerous wellbeing strategies since antiquated occasions to secure their lives. Before, just things with physical nearness required insurance and security (physical security); for instance: a house was utilized to get security against the brutality of nature, watches were utilized to secure spots, and weapons were utilized to ensure people, watchtowers, doors, channels, locks, and different types of insurances. This paper present digital watermarking (DW) and steganography based secured technique to secure the text and image. The proposed technique is implemented MATLAB software and calculates MSE and PSNR.

Keywords— DST, SVD, PSNR, MSE

I. INTRODUCTION

Since the start of life, individuals have been searching for security in every aspect of their lives from the regular risks, human threats or any peril they face. "Security" signifies the condition of being protected and the measures embraced to guarantee the security. Be that as it may, security isn't an objective or a flat out thing to arrive at it on the grounds that regardless of utilizing a large number of the security methodology to ensure something there is no 100 percent security [1]. People have been creating, making and utilizing numerous security methods since old occasions to ensure their lives. Before, just things with physical nearness required insurance and security; for instance: a house was utilized to get security against the cruelty of nature, watches were utilized to ensure places, and weapons were utilized to secure individuals, watchtowers, doors, channels, locks and different types of securities.

Security has three primary parts: prerequisites, strategy and systems. Necessities characterize security methodology. They answer the inquiry, "What do you anticipate that security should accomplish for you?" Policy characterizes the importance of security. It answers the question, "What steps do you take to arrive at the objective set out above?" Mechanisms uphold arrangement. They answer the inquiry, "What devices, methodology, and different ways do you use to guarantee the security?" These parts exist in all appearances of security [2].

The utilization of the Internet is unmistakably developing day by day, the quantity of the web clients is likewise expanding step by step, the complete populace of the world in January 2018 was 7.593 billion the web clients of the world was 4.021 billion; around 53 percent of the world have an entrance to the web [3]. Fundamentally, Internet has turned into the essential medium to move information all through the world, a great deal of information and data is touchy and need a security method to ensure it in the case of during the transmission or in its place.

Two essential strategies are accessible to secure the information and data in transmission state or instead of changeless stockpiling: Cryptography and Steganography, Cryptography is a strategy used to change the characters structure from the clear structure to mixed up structure, in this system the interloper can know whether there is figure content or then again not on the grounds that the characters are adjusted [4]. Steganography is a method used to conceal the characters or any media in other media, in this strategy the interloper can't know whether there is a figure content or not on the grounds that the characters are covered up in other media, so unapproved client can't see the characters in light of the fact that the characters are installed in another media. Steganography is known as "undetected" correspondence [5], in light of the fact that it hides a media in other media.

Steganography is a concealing media process over secured media and fundamental target is to impart and move significant data from one spot to another in a safe secure and imperceptible way. Actually importance writing in a spread is the act of concealing messages inside different messages so as to disguise the presence of the first. Steganography demonstrates to the mystery message or any computerized media record which has been covered up inside another computerized media document like picture, content, video or sound record [5].

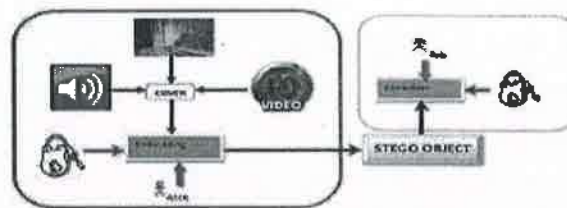


Figure 1: General schematic description

A Review on Privacy Preservation over Data Leakage in Cloud

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ABSTRACT

Cloud centered computing is the conclusion of acceptance and development of present-day technologies and prototypes. There are various researches take place to achieve external and internal reviews of cloud security. The information should be conserved and protectively accessible. The dissimilar safety disputes in cloud are heterogeneity, scalability, Data Truthfulness, Data Intrusion, Non- Disclaimer, Concealment, access control, authentication and authorization. Confidentiality of information data is additional safety issue connected with cloud computing environment. The motive of this paper is to review various techniques which have been proposed till now in the reference of cloud data security along with comparing their techniques. This paper also imputes the advantages and disadvantages of data accessibility through cloud and issues related to the databases.

Keywords : Cloud Computing, Cloud Security, Data Concealment, Data Encryption, SQL, Data Protection.

I. INTRODUCTION

At its modest form, cloud based computing [1] is the self-motivated distribution of information knowledge capabilities and resources as a facility over the Internet. The cloud computing can be well-defined as innovative computational proficiencies that motivation on both academia and industry. Cloud computing resources are storage, network, applications, servers and services. The cloud computing architecture [2] includes four distribution systems, five key features and three service prototypes. Better broadband suitability, different development in digital information and data, data storage requirements vary, and the presence of cloud computing is centered on the presence of cloud based databases. An indispensable objective of cloud computing [3] is to make available access to the pay-
 ons on computer-based resources such as networks, databases, applications and platforms. Services like electricity, water, telephony, and gas. Cloud-based

computing is a group of rules for allowing a suitable, universal, on-ground network. Cloud based providers are also called cloud service manufacturers, and cloud consumers are also called clients or cloud service users, who are the main columns in the cloud computing database. Cloud users can either be software service providers / applications. Cloud service provider is a company that provides financially effective cloud-based services using tools and programs.

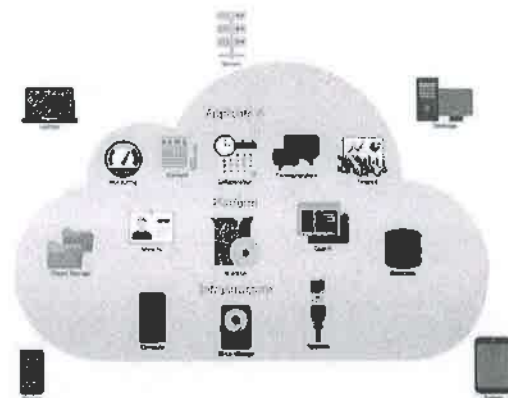


Figure 1.1 : Cloud Computing Environment [4]



A review on selection of turbulence model for CFD analysis of air flow within a cold storage

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Abstract: Experimental analysis of flow Distribution inside a cold storage is a costly affair, thus many researchers are intensively using computational techniques. In designing of various air distributions arrangements in cold storage Computational Fluid Dynamics (CFD) can play a vital role. There are various factors which affects the results produced through CFD analysis of air circulation in close environment like cold storage. Selection of the specific turbulence model for particular flow condition is a big bottle-neck. This paper discussed CFD approaches and various turbulence models used in cold storage air flow evaluation. Selection of turbulence model affects the analysis as each model use different set of boundary conditions. It has been observed that most of the researchers adopt RANS K- ϵ model because of its simplicity and ease of understanding. While on an average there is 26% error in results produced through RANS turbulence models and LES model provide good results but lots of skills and higher computational capacity required.

Key word: Computational Fluid Dynamic (CFD), Cold Storage, Air Circulation, RANS K- ϵ model, LES model, Turbulence model

1. Introduction:

Cold storage is the place where perishable items are stored to preserve them for prolonged time under controlled conditions. For preserving perishable items in cold storage very low temperature conditions are required. Air distribution in cold storage is play a vital for proper production of cooling effect with the help of refrigeration system. Air circulation in cold storage depend upon various factors like mechanical axial blower fans, position evaporator coils, thermal buoyancy, etc. Flow mechanisms is combination of natural, artificial (forced or induced), and mixed convection. Combination of various flow produces multifaceted enclosed air flow characteristics with buoyancy effects, boundary layer separation at various surfaces, circulation, vortices, etc. Air flow regime inside the chamber vary from laminar to transitional, transitional further developed in turbulent flows or transient conditions i.e. combination of all the flow regimes. Experimental investigation of air flow in side cold room is extremely difficult and expensive affair, it is because of the complexity of airflow and size of cold storage facilities.



A New Method of Bio-Medical Image Compression using Hybrid Techniques

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Abstract — Image compression goal is to reduce the size of an image but without losing the information, the loss of information some time is acceptable but not always, today's world the compression of image, video done with various techniques for the variety of an application. Medical science is one of the main application area for the image compression in which we compress the human body part images without losing the information and use in future. In this paper we proposed a hybrid model for the Bio-medical image compression which is better in the terms of result by measuring performance evaluation parameters to improve the value of performance parameter.

Keywords- Image compression, Particle Swarm Optimization, Encoder, Decoder.

I. INTRODUCTION

Image compression is used basically for the to reduce the size of an image with image registration and image restoration, there are various application of image processing such as medical science, real world application, security system, image enhancement etc. here we mentioned for the bio-medical image compression system, which improve the overall performance of image compression system using various techniques.

Bio-medical image compression system gives the concept of improve the ratio of compressed and decompressed image without the loss of any information. There are two compression techniques loss less and lossy image compression techniques.

For the compression we used various algorithm under both category such as wavelet transform, discrete transform, run length encoding, Huffman coding etc. the wavelet transformation function basically convert an input image into their coded data using some encoding techniques, at the receiver end we used decoder for the decode this information.

The below figure.1 shows the basic coder who convert the input image into coded data for the transformation methods and then compression of an image.

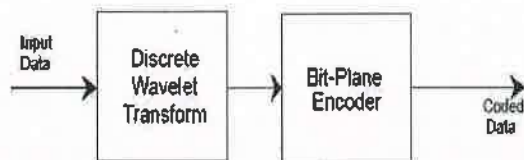


Figure.1 General Schematic of the Coder

The first section introduced about the Bio-Medical image compression techniques and their application areas. The remaining paper is organized as in section II we discuss about the proposed methodology and architecture for Bio-Medical image compression techniques. In section III we discuss about the experimental result analysis and the comparative study about the time taken in a particular process, finally in section IV we conclude the about the conclusion and future scope.

II. RELATED WORK

Author in [1] reported to have analysed various transform techniques viz. Discrete Cosine transform, Singular Value Decomposition, Discrete Hadamard transform, Slant transform, Discrete Haar Transform, which have been applied on biomedical images for image compression. It has also been reported that the biomedical images are subjected to all compression schemes mentioned by having specific PSNR values. The reconstructed images on the specific set values been analysed on the basis of the quality of reconstruction to throw light on optimal transform.

In [2] authors have reported certain methods of compression by using wavelet transforms, which have been used to characterize a complex pattern as a series of simple patterns and coefficients in such as way that when multiplied and summed, it will reproduce the original pattern. Wavelets are a class of functions, which are used to localize a given signal in both space and scaling domains.

In [4] author have presented Haar and wavelet based image compression and analysis has been done for this compression for its performance measurement parameters. In this work authors have also tried to give mathematical way of encoding information in such a way that it is layered according to level of detail.

In [6] authors have proposed one metric, which considers the basic image features employed by most DNA microarray analysis techniques. The implemented and experimental results have been presented in the direction of metric, which can identify and differentiate important and unimportant changes in DNA microarray images. DNA microarray images are an intermediate product of DNA



Comparative Analysis of LDPC decoding by Bit flipping Algorithm using QAM and QPSK modulation techniques for DVB-S2

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Abstract- Digital communication played important role in wireless system for development of human society for the efficient digital transmission, it is necessary to receive errorless data at receiver. Low-density parity-check (LDPC) codes are comparable with different coding techniques like convolution, block coding, BCH, trellis coding, turbo coding etc. In terms of performance and complexity. This paper presents more efficient modulation and demodulation techniques using QAM and QPSK for DVB-S2 (Digital Video Broadcasting Satellite) standard with LDPC encoder and decoder. BER performance of LDPC coding with Bit flipping Algorithm using QAM and QPSK modulation technique for DVB-S2 standard has been compared.

Keywords- DVB-S2, LDPC encoder and decoder, Bit flipping Algorithm.

I. INTRODUCTION

In digital communication systems, high data rate is one of the main requirements due to abundant information for communication. This requirement can be fulfilled by using LDPC coding technique in data communication system. These codes were first introduced by Robert Gallager way back, which used modulo arithmetics, thereafter it was considered by the Consultative Committee for Space Data Systems (CCSDS) for telecommunication and applications [1]. In mid-nineties, Non binary LDPC codes rediscovered by Davey and MacKay, whose performance is closest to the Shannon limit based on irregular graphs or Tanner graph over finite fields [2].

Over the last years, the study of error correcting encoding and decoding techniques, using Low-Density Parity-Check (LDPC) codes, consecutively on noisy hardware attracted more and more interest in the coding community with complex decoding algorithms, but the LDPC code can also significantly reduce the BER to meet the required signal-to-noise ratio (SNR) in wireless channels [3]. LDPC codes mostly employed in 10Gbps Ethernet communication (IEEE standard 802.3), Digital Video Broadcasting (DVB-S2), DTH Service, space communication, magnetic storage in hard disk drive, Wi-Fi and WiMAX [4]. Belief propagation algorithm is first decoding algorithm of LDPC code but it contains complex variable node and check node estimation [5, 6]. Another min-sum, message-passing algorithms also not have efficient encoding and decoding technique for DVB-S2 standard because it cannot improve the decoding performance of LDPC code [6]. DVB-S2 a new European satellite broadcasting system, has also employed a concatenated code composed of a LDPC code and BCH code [8, 9]. In particular, LDPC codes have demonstrated much better performance than turbo codes

and as it is having wide range of tradeoffs between performance and high decoding and encoding complexity [10, 11]. Therefore, the LDPC codes have considered to be widely used for next generation error-correcting codes for telecommunication and other such communication applications [12].

In 1994, firstly DVB-S was introduced as a standard and another one is introduced DVB-DSNG in 1997. After that, DVB-S2 standard specifies QPSK and QAM modulation and concatenated channel encoding and decoding using LDPC. Now a day, it used by most satellite operators worldwide for television and data broadcasting services [13, 14].

The LDPC code has various complex encoding and decoding algorithm such as bit flipping algorithm used in this proposed work, it can greatly reduce the BER to meet the required signal-to-noise ratio (SNR) in wireless channels as compared to another code like biorthogonal code, BCH code, convolutional code, trellis code, turbo code etc.

In this paper the performance of the LDPC codes has been compared in terms of QAM (Quadrature Amplitude Modulation) and QPSK (Quadrature Phase Shift Keying) modulation for DVB-S2 on different code rates (1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10) by using Bit flipping Algorithm for decoding.

The rest of the paper is organised as follows: Section II is describing LDPC encoding and decoding Technique. Structure of bit-flipping algorithm is discussed in Section III. Comparative results and simulation is present in section IV. Conclusion is given in section V.

II. LDPC ENCODING AND DECODING TECHNIQUES

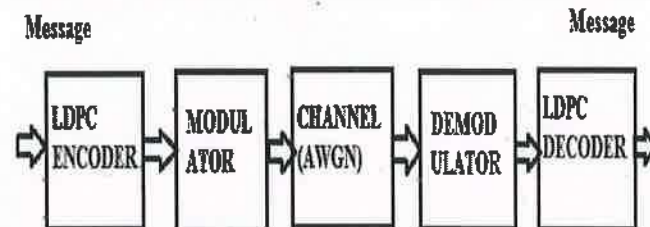


Figure1: Basic Communication Model for data transmission using LDPC Technique

The basic communication system model has been shown in Figure 1 with LDPC encoder as source. The model has been provided efficient adaptation of the output of preceding stage into a sequence of binary digits on different data rates. Channel LDPC encoder has been designed to add the extra bits to the source encoded bits in order to cope with the



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Enhancing image security using data compression and spread spectrum watermarking technique

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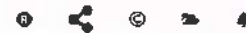
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Abstract



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- II. Literature Review
- III. Digitalwatermarking techniques
- IV. Proposed Methodology
- V. Experimental Results

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Keywords

Metrics

Abstract:To protect multimedia information system like audio, video, text and image, digital watermarking could be a legendary technique that hides or cover one type of informatio... [View more](#)

Metadata

Abstract:

To protect multimedia information system like audio, video, text and image, digital watermarking could be a legendary technique that hides or cover one type of information into a different or same type of information to fulfill the needs of copyright protection. Digital watermarking makes an attempt to handle the issues regarding the management of characteristics of multimedia system such as possession recognition, authentication and certifications. A lot of efforts have been made to guard the image information from unauthorized access however some of them seemed not too effective. During this research work, we have a tendency to project a picture information to enhance the information security in digital watermarking. We propose an image data protection technique using the combination of data security such as encryption technique and digital watermarking. The implementation of the projected technique is accomplished in MATLAB 2012a simulator and the outcomes are analyzed using performance parameter such as PSNR, MAE, etc.

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ROLE OF CIVIL ENGINEERS IN GREEN BUILDING

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Abstract:- There are three Green Building Rating system operational in India. Although it is considered that design and development of Green Buildings are Architect, Mechanical and Electrical Engineers job. It is the Civil Engineers create need and chase site for Building. They are involved all the phases of building from planning, execution, maintenance, addition alteration and disposal of building. Apart of aesthetics and comfort creation by electro-mechanical means it is the civil engineering profession who recognizes the reality of limited natural resources and directly responsible for strength and durability of buildings. This paper discusses a framework of green building rating systems and civil engineering role in it. By providing a better understanding of Green Buildings, civil engineers can provide proactive solution to competitive global infrastructures.

KEYWORDS: Sustainable construction, civil engineering, green buildings, Sustainable development.

Introduction

Globally, the construction industry is one of the main contributors to the depletion of natural resources and a major cause of unwanted side effects such as air and water pollution, solid waste, deforestation, health hazards, global warming, and other negative consequences.

In order to stay competitive and to meet upcoming stricter environmental regulations and customer requirements, designers have a key role in designing civil infrastructure so that it is environmentally sustainable. These and other factors have compelled the engineer to design with greater care and in more detail. The changing roles of engineers will be highlighted, in order to react to changes in climate.

Conventionally the prime focus of a civil engineer is building strength and lifespan, but with present changing scenario, awareness and responsibility toward environment the characterization of civil engineer has changed from "The one who directs nature great power source to convenience and use of man" to "the guardians of built and natural environment" (Ochsendorf, 2005).

A sustainable building, or green building is an outcome of a design which focuses on increasing the efficiency of resource use -- energy, water, and materials -- while reducing building impacts on human health and the environment during the building's lifecycle, through better siting, design, construction, operation, maintenance, and removal. Green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment by:

- Efficiently using energy, water, and other resources
- Protecting occupant health and improving employee productivity
- Reducing waste, pollution and environmental degradation

The 'Green Building' concept is gaining importance in various countries, including India. In India there are two Systems of Green Building Certification

- I. CII- LEED INDIA (Indian green Building Council).
- II. GRIHA system developed by The Energy and Resource Institute (TERI).



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RESEARCH ARTICLE | JULY 18 2018

The effect of the size on the oscillatory internal circulation for an evaporating methanol-water drop

Suraj Prasad; Anrit Kumar; S. Narayanan; Deepak Kumar Mandal

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AIP Conf. Proc. 1988, 020030 (2018)

<https://doi.org/10.1063/1.5047624>

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The effect of the initial drop size on the oscillatory internal circulation for a suspended drop evaporating inside a closed chamber at normal surrounding temperature is reported. The cyclic boosting and retardation of the flow around the centre of the drop is observed and hence, the process is termed oscillatory circulation for the present case. It is reported in the earlier literature that



Reversible Data Hiding by Utilizing AES Encryption and LZW Compression

Akshay Kumar Joshi and Sanjay Sharma

Abstract The Increase of digital media transfer made the modification of the image very easy. So one major issue of proprietorship is raised, as copying and transferring are very soft practices. Here this paper has to resolve proprietorship problem by embedding the digital data with encryption. In this work, embedding of data is done applying the LZW algorithm. Then robustness is provided by using the AES algorithm. Finally by using spatial technique, embedding of digital data is done in encrypted image. Experiment is done on real dataset image. Evaluation parameter values show that proposed work has maintained the SNR and PSNR values with high robustness of the data.

Keywords Color format · Digital watermarking · Frequency domain LSB

1 Introduction

As Internet facility is growing drastically, users are attracted by various service providers day by day. Some of them are online shops, digital marketing, social network, registrations, etc. This easy access lead to violate the proprietorship easily, as users can stolen others work and make digital print with their name. But this technology gives rise to new problem of piracy or in other words proprietary get easily stolen. In order to overcome this issue, many techniques were suggested and proprietary of the digital data is preserved [1, 2]. So to overcome this, different techniques are used for preserving the proprietary of the owner. Out of many

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NonHomogenous Anonymization Approach Using Association Rule Mining For Preserving Privacy

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Abstract— Statistics reveals that with the advancement of technology, data sharing has become crucial for the purpose of research and analysis. Many organizations share their data with third party vendors to gain information regarding the relevant and meaningful patterns that are hidden among the vast amount of raw data. But as the data needs to be shared with the third party, maintaining privacy of the individual becomes a challenging task. Thus, it becomes critical to share data in such a way so that privacy of the individual records is not hampered. This requirement has escalated the demand of research in a relatively new field that is privacy preserving data mining. Many techniques has been studied and developed related to this field which are based on either central server or distributed server. Some of these techniques include K-Anonymity, l-diversity, cryptographic method, randomization etc. Based on k-anonymity framework, nonhomogenous approach of generalization has already been proposed earlier. This approach of nonhomogenous anonymization provides privacy to the identity of individual records but suffers high privacy risk factor.

The objective of the present work is to extend the existing approach of nonhomogenous generalization using association rule mining. Experimental results show that proposed technique performs better than existing technique based on two evaluation parameters – i.e. data disclosure Risk factor and execution time.

Keywords—Anonymization, Privacy preservation, Data mining, Nonhomogeneous generalization.

1. INTRODUCTION

With the advancement of technology, information is being collected digitally by government, organizations and by individuals, which has further escalated the process of knowledge discovery and decision making. As shown in a report from Risk Based Security (RBS) [1], the number of disclosed sensitive data records has increased significantly during the last few years, i.e., from 412 million in 2012 to 822 million in 2013. Hence, now days it is becoming increasingly popular to publish data containing individual identity in such a way so that individual identity is not lost. PPDM is a field of study which protects individual identity while publishing data to third party for the purpose of research and analysis. The aim of PPDM algorithms is to maximize the information gain from

data publishing while limiting the privacy disclosure risk at an acceptable level [2]. Although data disclosure is favourable in many situations such as in research, but it also includes some risk of disclosing identity to adversary. For example, publishing health care information directly though helps in providing better assistance to the patients but increases the probability of the identity disclosure of the patients. When organizations try to maintain the privacy of individuals then it becomes compelling to expose the least amount of information. To accomplish such an objective, the organizations commonly modify the micro data through a set of transformations. These transformations typically consists of (1) data suppression (providing the most generic form) (2) data generalization (publishing a less specific variant of micro data), and (3) data perturbation (Introducing some noise element in the original data such as in). Generalization further can be done in two ways. In case of homogenous generalization, all the tuples of the equivalence class are assigned the same generalized values of the QID. And in case of nonhomogenous generalization, tuples may have different generalized QID [9].

The challenge with PPDM approaches is that, at one side, individual identity can be revealed, and, at the other side, data can be excessively transformed and hence may become useless. The emerging field of privacy preserving data mining is to address this challenge. In this paper we present an extended approach of nonhomogenous anonymization with aims at reducing the data disclosure risk factor while maintaining the data utility.

This paper presents a robust technique of anonymization using association rule mining. In section 2, related work already done in this field is discussed. In section 3, general concepts of the topic are discussed and problem with the existing systems mentioned. Proposed methodology with algorithm is given section 4. Results are shown in section 5. Conclusion and future work is given in section 6.

2. RELATED WORK

The idea and model of k-anonymity was first introduced by Samarati and Sweeney[3] which is now being used as the basic




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