

# PROCEEDINGS

NATIONAL CONFERENCE  
ON

WIRELESS COMMUNICATIONS &  
SENOR NETWORKS

Dec 17th-18th, 2018

*Organized By*



**CAPITAL ENGINEERING COLLEGE  
MAHATAPALLA  
BHUBANESWAR, ODISHA, 752055**



# CONTENTS

SL. NO.	TITLE	AUTHORS	PAGE NUMBER
1	SURVEY ON LINK LAYER ATTACKS IN COGNITIVE RADIO NETWORKS	PROF.RASMI SARANGI et al.	1-5
2	WEB SERVICES COMPOSITION METHODS AND TECHNIQUES: A REVIEW	PROF.IPSIT JOSHI	6-17
3	CURRENT SERVICES IN CLOUD COMPUTING: A SURVEY	Dr. KAILASH CHANDRA ROUT et al.	18-24
4	COMPARING REINFORCEMENT LEARNING AND ACCESS POINTS WITH ROWEL	PROF.AKSHAYA KUMAR SATPATHY et al.	25-30
5	SURVEY ON CACHING AND REPLICATION ALGORITHM FOR CONTENT DISTRIBUTION IN PEER TO PEER NETWORKS	PROF.AMITAV SARAN et al.	31-39
6	A ROBUST IRIS RECOGNITION METHOD ON ADVERSE CONDITIONS	PROF.BHUPESH DEKA et al.	40-51
7	CANDIDATE SOLUTIONS TO IMPROVE WIRELESS MESH NETWORKS WMNS PERFORMANCE TO MEET THE NEEDS OF SMART GRID APPLICATIONS - SURVEY PAPER	PROF.BIBHU PRASAD SAHU et al.	52-60
8	OBJECT SEGMENTATION USING MULTISCALE MORPHOLOGICAL OPERATIONS	DR.SACHI NANDAN MOHANTY et al.	61-73
9	MULTI-OBJECTIVE ENERGY EFFICIENT OPTIMIZATION ALGORITHM FOR COVERAGE CONTROL IN WIRELESS SENSOR	DR.SASMITA PANI et al.	74-79

	NETWORKS		
10	INFORMATION RETRIEVAL FROM TEXT	DR.SATYABRATA DASH et al.	80-84
11	TECHNOLOGY ADOPTION IN THE ARABIAN GULF COUNTRIES: THE CASE OF E-GOVERNMENT	PROF. SASWATI NAYAK et al.	85-91
12	MODEL OF SOLUTIONS FOR DATA SECURITY IN CLOUD COMPUTING	PROF. NARENDRA KUMAR ROUT et al.	92-98
13	A PACKET DROP GUESSER MODULE FOR CONGESTION CONTROL PROTOCOLS FOR HIGH SPEED NETWORKS	PROF. PAPPU SHARADA et al.	99-109
14	OPTIMIZATION OF LATENCY OF TEMPORAL KEY INTEGRITY PROTOCOL (TKIP) USING GRAPH THEORY AND HARDWARE SOFTWARE CO-DESIGN	PROF. R SUBBA RAO et al.	110-114
15	PHASE-PRIORITY BASED DIRECTORY COHERENCE FOR MULTICORE PROCESSOR	PROF. SANTOSH KU. SATAPATHY et al.	115-125
16	A STUDY OF OPTIMIZED GLASS FIBER STRENGTHENED	PROF. SANJIB KUMAR DAS	126-133
17	STUDY AND ANALYSIS OF SOLAR TRACKING GPS CONTROL SYSTEMS	PROF. SATYAKAM ACHARYA et al.	134-139
18	DEVELOPMENT OF WASTE COCONUT OIL AND EFFICIENCY, POLLUTION AND COMBUSTION CHARACTERIZATION USING DIESEL ENGINE	PROF. SARADENDU BHUJABAL et al.	140-149
19	ANALYTICAL EVALUATION OF DRILLING PHASE OF HYBRID COMPOSITS USE SYSTEM TAGUCHI	PROF. ANITA PRITAM et al.	150-158

20	ANALYSIS REVIEW VIBRATION OF TI-ALLOY GAS TURBINE BLADE ROTATION	PROF. ASMEETA JAGDEV et al.	159-168
21	EVALUATIONS AND STUDY OF PROCESS METHODOLOGY OF X65 OIL PIPELINE CRACKING STRESS CORROSION	PROF. ASUTOSH SAHU et al.	169-179
22	AN EXPERIMENTAL STUDY ON TIO2 BASED SELF CLEANSING CONCRETE BY PARTIAL REPLACEMENT OF SAND BY WASTE GLASS	PROF. BALABHADRA DEHURY et al.	180-183
23	LITERATURE WORK STUDY OF PRECAST CONCRETE CONNECTIONS IN SEISMIC	PROF. RAJESH KUMAR SWAIN et al.	184-194
24	THE EFFECTIVENESS OF FLY ASH AS A SUBSTITUTE OF CEMENT FOR MARINE CONCRETE	PROF. SUBHANKAR SHIBAJYOTI PUHAN et al.	195-206
25	EFFECT OF L/B RATIO OF STONE COLUMN ON BEARING CAPACITY AND RELATIVE SETTLEMENT OF SANDY SOIL	PROF. SMRUTIRANJAN RANJAN PRADHAN et al.	207-213
26	MECHANICAL CHARACTERISTICS OF NORMAL CONCRETE PARTIALLY REPLACED WITH CRUSHED CLAY BRICKS	DR. MOHAMMED KHALID KHAN et al.	214-227
27	GREEN TRENDS IN CIVIL ENGINEERING FOR FEASIBLE IMPLEMENTATION IN BUILDINGS	DR. HARIPRIYA MISHRA et al.	228-231
28	GENERALIZED NEUTROSOPHIC SOFT SET	PROF. SASWATI SAHOO et al.	232-235
29	ANTI-SYNCHRONIZATION OF HYPERCHAOTIC WANG AND HYPERCHAOTIC LI SYSTEMS WITH UNKNOWN PARAMETERS VIA ADAPTIVE CONTROL	PROF. SALILA MALLA et al.	236-255

30	FPGA ARCHITECTURE FOR FACIAL-FEATURES AND COMPONENTS EXTRACTION	PROF. SUDHANSU BISOYI et al.	256-269
31	IMPLEMENTING HIERARCHICAL CLUSTERING METHOD FOR MULTIPLE SEQUENCE ALIGNMENT AND PHYLOGENETIC TREE CONSTRUCTION	PROF. SUNIL PANIGRAHI et al.	270-281
32	ANDROID BASED WS SECURITY AND MVC BASED UI REPRESENTATION OF DATA	PROF. SUREN KU. SAHU et al.	282-287
33	GENERALIZED POWER ALLOCATION (GPA) SCHEME FOR NON-ORTHOGONAL MULTIPLE ACCESS (NOMA) BASED WIRELESS COMMUNICATION SYSTEM	PROF. RASHMIPRAVA MISHRA et al.	288-294
34	A SURVEY OF EMPLOYERS' NEEDS FOR TECHNICAL AND SOFT SKILLS AMONG NEW GRADUATES	PROF. ANCHAL PARAMGURU et al.	295-303
35	ANALYSIS OF EXISTING TRAILERS' CONTAINER LOCK SYSTEMS	PROF. JITENDRA MISHRA et al.	304-308
36	RANDOMIZED STEGANOGRAPHY IN SKIN TONE IMAGES	PROF. SUSHRUTA MISHRA et al.	309-315
37	DEVELOPMENT OF AN EMPIRICAL MODEL TO ASSESS ATTENTION LEVEL AND CONTROL DRIVER'S ATTENTION	PROF. SUSMITHA AR et al.	316-328
38	A SMART PARKING SYSTEM USING M2M COMMUNICATION	PROF. PRANGYA PARIMITA PADHI et al.	329-335
39	A SMART HELMET FOR COAL MINERS	PROF. MANORANJAN SAHOO et al.	336-344

40	DESIGN OF WEARABLE ANTENNAS FOR 5G APPLICATIONS	PROF. SULOCHANA NANDA et al.	345-353
41	POSSIBLE SOLUTIONS FOR INTERFERENCE COORDINATION IN HETNETS OF LTE-A	PROF. POONAM TRIPATHY et al.	354-361
42	IMPLEMENTATION OF AES ENCRYPTION IP	PROF. DHEERAJ KUMAR et al.	362-373
43	MUSIC GENERATION USING WAVENET ARCHITECTURE	PROF. ABHISEK GANTAYAT et al.	374-381
44	MANAGEMENT AND INTERCULTURAL DIALOGUE CHALLENGES AMID SECURITIZATION STEP-UP	PROF. MINUSHREE PATTNAIK et al.	382-391
45	THE INFLUENCE OF STRENGTHENING SENSITIVITY ON EXTROVERTED RISK BEHAVIORS OF CHINESE COLLEGE STUDENTS	PROF. SUSHREE BEHERA et al.	392-401
46	LEAN ACCOUNTING AWARENESS: A QUALITATIVE STUDY ON LEAN ACCOUNTING PERCEPTION	DR. BIDYUT PRAVA NAYAK et al.	402-418
47	DURABILITY STUDIES OF GGBS AND METAKAOLIN BASED GEOPOLYMER CONCRETE	DR. SANTOSH KUMAR SAHOO et al.	419-430
48	A CRITICAL EVALUATION ON POZZOLONIC PROPERTIES OF SELECTED MATERIALS AND THEIR REPLACEMENT IN CEMENT	PROF. SAUMYAJYOTI SARANGI	431-438
49	EXPERIMENTAL STUDY ON ANCHORAGE BOND IN HIGH STRENGTH REINFORCED CONCRETE BEAMS	PROF. SIMANTINEE SAMAL et al.	439-448
50	EXPERIMENTAL INVESTIGATION OF RECYCLED AGGREGATE CONCRETE USING PRE-SOAKED SLURRY TWO STAGE MIXING APPROACH	PROF. SRIBASTAB PATRA et al.	449-457

51	TRANSESTERIFICATION AND PERFORMANCE TEST IN DIESEL ENGINE IONIC LIQUID CATALYSIS TO PRODUCE COTTONSEED	PROF. BIBHUTI BHUSAN SAHOO et al.	458-467
52	DESIGN ANALYSIS AND INVESTIGATION OF FABRICATED WEEDER FOR TAPIOCA FARM	PROF. BIDYUT PRAVA JENA et al.	458-479
53	DESIGN AND DEVELOPMENT OF HAND POWER TRICYCLE FOR DISABLED USING HAND LEVER AND CRANK SYSTEM	PROF. BIGHNESH SAHU et al.	480-487
54	RADIATION AND CHEMICAL REACTION EFFECTS ON MHD CASSON FLUID FLOW OF A POROUS MEDIUM WITH SUCTION/INJECTION	PROF. BINAYAK MISHRA et al.	489-508
55	INVESTIGATION OF TILT-ANGLED DELIVERY VALVE IN HYDRAULIC RAM – EXPERIMENT RESULTS	PROF. BISWAJIT MOHAPATRA et al.	507-519

# Development Of An Empirical Model To Assess Attention Level And Control Driver's Attention

Susmitha Ar<sup>1</sup>, Ms. Saswati Nayak<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Engineering College)

<sup>2</sup>(Computer Science & Engineering, Gandhi Engineering College)

## ABSTRACT

*Any kind of vehicle driving is one of the most challenging tasks in this world requiring simultaneous accomplishment of numerous sensory, cognitive, physical and psychomotor skills. There are various number of factors are involved in automobile crash such as driver skill, behaviour and impairment due to drugs, road design, vehicle design, speed of operation, road environment, notably speeding and street racing. This study focuses a vision based framework to monitor driver's attention level in real time by using Microsoft Kinect for Windows sensor V2. Additionally, the framework generates an awareness signal to the driver in case of low attention. The effectiveness of the system demonstrates through board experiments in case of hostile light conditions also. Experimental result illustrates the quite well functionality of the framework with 11 participants and measures the attention level of participants with equitable precision.*

## KEYWORDS

*Kinect, Software Development Kit (SDK), Eye State (ES), Face Angle (FA), Mouth Motion (MM), Attention with Eye State (AE), Attention with Face Angle (AF) and Attention with Mouth Motion (AM).*

## 1. INTRODUCTION

Day by day the increasing number of automobile crashes in every year becomes an alarming issue for each nation. Traffic collision, which is caused by human or mechanical failure, carelessness or a combination of many other factors, should be dealt with the principles of anticipation, attention and compensation.

Hence, traffic safety enhancement turn into a high priority task for different government agencies over the world such as National Transportation Safety Administration (NTSA) in USA and Observatoire National Interministeriel de la Securite Routiere (ONISR) in France. Researchers recommended that 57% of crashes were due solely to driver factors, 27% to combined roadway and driver factors, 6% to combined vehicle and driver factors, 3% solely to roadway factors, 3% to combined roadway, driver and vehicle factors, 2% solely to vehicle factors and 1% to combined roadway and vehicle factors [1]. In fact, inattentive driving is responsible for 20-30% of road deaths and this statistic reaches 40-50% in particular crash types, such as fatal single vehicle semitrailer crashes [2].

Since, there are no standard rules to measure driver's attention level; the unique solution is to observe driver's attention level continuously. Unfortunately driver's attention level goes down due to several reasons such as sleep deprivation, fatigue, talking over mobile phone, texting over cell phone, talking with passengers, looking away out of the direction, eyes off the road, hypnotic

drugs, driving more than two hours without break and driving in a monotone road. Most of the time drivers are not alert when their attention level goes down and as a result, catastrophic road accident may occur within a second. So, driving with proper level of attention plays an important role in reducing the accident rate as well as promises safe journey. At the same time continuous monitoring of driver's attention level is also a significant issue for the improvement of the driving enactment.



# Randomized Steganography In Skin Tone Images

Sushruta Mishra<sup>1</sup>, Susmitha Ar<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Engineering College)

<sup>2</sup>(Computer Science & Engineering, Gandhi Engineering College)

## ABSTRACT

*Steganography is the technique of hiding a confidential message in an ordinary message and the extraction of that secret message at its destination. Different carrier file formats can be used in steganography. Among these carrier file formats, digital images are the most popular. For this work, digital images are used. Here steganography is done on the skin portion of an image. First skin portion of an image is detected. Random pixels are selected from that detected region using a pseudo-random number generator. The bits of the secret message will be embedded on the LSB of these random pixels. An analysis is done to check the efficiency and robustness of the proposed method. The aim of this work is to show that steganography done using random pixel selection is less prone to outside attacks.*

## KEYWORDS

*Steganography, Pixels, Pseudo-Random Number Generator, LSB, Stego Image*

## 1. INTRODUCTION

Steganography is the method of hiding a confidential message in a common or an ordinary message and the extraction of that confidential message at its destination. The term steganography is derived from Greek which means 'covered writing' [1]. Cryptography and steganography are closely related to each other [1]. Steganography is the method of hiding the messages that it cannot be seen. Cryptography changes a message so that it cannot be understood. A secret message in the form of ciphertext might arouse suspicion while a message which is invisible or hidden created by using steganographic methods will not [1].

Steganography is mostly used on computers with digital data being the carriers and networks being the high-speed delivery channels. Different carrier file formats (text, images, audio/video etc.) can be used in order to perform steganography. In this article, digital images are used as the carrier file format. There are mainly two methods by which steganography can be performed: spatial domain steganography and transform domain steganography [2]. In spatial domain steganography, the steganography is done directly on the pixels of an image while in transform domain steganography, the image is first converted to a particular domain (cosine, wavelet, etc.) then steganography is done, after that it is converted back to its original form. This work focuses on spatial domain steganography. There are many methods in spatial domain steganography. One of the most common and popular methods is LSB. It is one of the oldest methods in spatial domain steganography. Here an encryption key is also used in LSB method. The bits of the secret message is XORed with the bits of the encryption key. Thus an encrypted message is obtained.

In this article the steganography is done on the skin portion of an image. For that, the skin region from an image is detected. The skin tone detection is done by using YCbCr color space. From the

## Analysis Of Existing Trailers' Container Lock Systems

Mr. JITENDRA MISHRA<sup>1</sup>, Mr. SALILA MALLA<sup>2</sup>

<sup>1</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

<sup>2</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

### ABSTRACT

*Trailers carry large containers to various destinations in the world. These are manually locked on to trailers as they move through these long distances. Security mainly refers to the safety of a state, organization, property, and individuals against criminal activity. The study was made to analyze the existing trailer locks and the insecurity being experienced currently. The study also focused on creating a background to building an automated lock system for auto-mobiles. Findings showed that there are various container types like the General Purpose containers, the Hard-Top containers and the Open-Top among others. Similarly, the twist locks were the ones revised for this study. The study also discussed the weaknesses of the twist locks, most especially the non-notification on unsecured locks. This causes leads to accidents and wastage of lives and property. The study finally proposed an automated lock system to overcome these weaknesses to some good extent.*

### KEYWORDS

*Accidents, Automated Lock System, Container, Security, Trailer.*

## 1. INTRODUCTION

Most luggage that is imported in various countries is carried in containers. These are locked and carried on the trailer cars. Cartons, crates, wooden cases, palletized cargo, drums, plastic cans, sacks and bales, rolls and coils, steel plates, vehicles, sheets of glass, wet hides and skins, liquids, bulk freight, long cargo and live animals are some of the contents in the containers. [1].

The security and safety of the container as it travels from place to place and before it leaves for its destination mainly depends on the trailer driver to check whether the container is fully locked or not. Surprisingly from time to time containers fall off the trailers due to many reasons like insecure locks and over speeding. Insecure locking is mostly a result of the drivers failing to physically check the locks, and the lack of secure lock system displayed in the cabin. Several scenarios from around the world where accidents from insecure locks have been identified. Three cases have been highlighted:

On Monday, April 20<sup>th</sup> 2015, in Dubai, United Arab Emirates, two containers loaded with paint fell off the truck on a main road called Al Muhaisana, though no one was injured. These damaged the road surface, road signs and symbol boards [2]. In another incident, one person reportedly killed after a shipping container fell on the top of a truck on the north east side of Oklahoma City. The second person who was in the car was rushed to hospital for immediate attention [3].

On Wednesday, 2<sup>nd</sup> September 2015, a container fell off from a trailer while crossing the bridge at Ojuelegba in Nigeria. This instantly killed two people in a car below the bridge [4]. Similarly, in October 2014, a container fell off a trailer which was heading to Kampala at Bweyogerere on the Jinja highway road. Nobody was killed or injured in this incident [5].

## 2. METHODS AND MATERIALS

### Literature Review

It involved reading a vast number of pieces of literature. These were largely from different informative sources like internet, books, journals, and newspapers [1], ..., [5], among others. The literature was about the containers, trailers and the lock monitoring systems. The information necessary for the identification

# A Survey Of Employers' Needs For Technical And Soft Skills Among New Graduates

Ms. ANCHAL PARAMGURU<sup>1</sup>, Mrs. MINUSHREE PATTNAIK<sup>2</sup>

<sup>1</sup>(Basic Science & Humanities, Capital Engineering College)

<sup>2</sup>(Basic Science & Humanities, Capital Engineering College)

**ABSTRACT**

Motivated by concern about the ability of graduates to succeed in the workforce, universities frequently conduct surveys of local and regional employers, to understand those companies' expectations. These can uncover specific needs not being addressed. Following a similar line of inquiry, prior research at Oregon State University interviewed employers, with the aim of identifying skills of concern. The current paper takes this research another step further by presenting a survey-based study aimed at quantifying the prevalence and level of employers' desire for workers who have these identified skills. Although all skills were rated as moderately useful or better, most soft skills scored higher than most technical skills. Nonetheless, three technical skills (source code versioning, testing and agile methods) scored approximately as well as the soft skills; these three technical skills, like soft skills, were cross-cutting and applicable to more than one software development context. Further survey questions revealed that employers preferred that, to the extent that students focus on building technical skill, these learning experiences ideally should involve creating software that students can use as evidence of their qualifications.

**KEYWORDS**

Computer science education, Software engineering education, Information technology education

**1. INTRODUCTION**

**BACKGROUND**

Software Developers Recently Graduated From College Frequently Need To Learn And Improve A Range Of Skills, Even After Obtaining Their First Jobs [1, 2, 3, 4]. While Some Gaps In Expertise Relate To Soft Skills And Associated Personal Attributes, Such As Those Related To Communication And Collaboration [1, 4], While Others Relate To Technical Skills Such As Source Code Control, Testing, And Specific Programming Languages [1, 4, 5]. Such Limitations In Recent Graduates' Abilities Can Hamper Their Comfort And Productivity [6].

Motivated By Concern About The Ability Of Graduates To Succeed In The Workforce, Universities Frequently Conduct Surveys Of Local And Regional Employers, To Understand Those Companies' Expectations. These Can Uncover Specific Needs Not Being Addressed. For Example, Research In The United Kingdom Found That Web-Based Programming Skills WereOf High Importance [7], Research With North Dakota State University's Employer Contacts Revealed The Need For Students To Do More Realistic Projects Before They Graduated [8], Research In Australia Highlighted The Need For More Business-Related Knowledge [9]. The Mismatch Between Identified Skills And University Curricula Has Aided In Identifying Opportunities For Improving Curricula By Creating, Expanding Or Reordering Courses [9, 10].

Following a similar line of inquiry, prior research at Oregon State University interviewed employers, with the aim of identifying skills of concern [11]. The skills revealed by these interviews covered both technical and soft skills (Table 1) and echoed many highlighted in the studies cited above. These included, for example, agile methods, the ability to collaborate, user interface design, and entrepreneurship skills.

Technical/domain skills	Soft skills / attributes
Agile methods	Ability to collaborate
Mobile development	Ability to cope with ambiguity
Non-relational data/big data	Learning and curiosity
Relational databases	Passionate innovation
Source code management	
System administration	

# Generalized Power Allocation (Gpa) Scheme For Non-Orthogonal Multiple Access (Noma) Based Wireless Communication System

Mrs. RASHMIPRAVA MISHRA<sup>1</sup>, Mr. JITENDRA MISHRA<sup>2</sup>

<sup>1</sup>(Electronics & Communication Engineering, Capital Engineering College)

<sup>2</sup>(Electronics & Communication Engineering, Capital Engineering College)

## ABSTRACT

*This paper presents a Generalized Power Allocation (GPA) scheme for different users in Non-Orthogonal Multiple Access (NOMA) based wireless communication system. The power allocation to the users becomes complex with the increased number of users. There are some conventional schemes for power allocation in NOMA but they have to optimize some parameters arbitrarily. In this paper, a simple but effective power allocation scheme has been formulated and tested by simulations. The proposed GPA scheme does not need any parameter adjustment. Theoretical power distribution to different users of NOMA has been calculated using the proposed GPA technique. The calculated powers of individual users with the proposed scheme are different and more distributed than the arbitrary power allocation scheme which satisfies the basic condition of NOMA. The total of calculated powers with GPA scheme shows only 01% variation with the arbitrary power allocation scheme which shows the consistency of GPA scheme with other schemes. The performance of NOMA based wireless communication system with GPA scheme has been simulated under various conditions using Matlab. The simulated BER performance for NOMA based wireless communication system using different modulation techniques show similar results with other conventional schemes which validates the formulation of GPA scheme.*

## KEYWORDS

*BER, power allocation, OFDMA, NOMA, FTPA, GPA, fairness index.*

## 1. INTRODUCTION

The rapid growth of innovations in information and communication technology area has greatly emphasized the wireless communication experience of current generation. In future, new generation are expected to be surrounded by smart objects in smart homes, offices, streets, and cities in the smart world [1]. Researchers and network service providers face many challenges due to the exponential growth of data traffic and connected devices. In this context, we need to improve network performance in terms of throughput and capacity, or number of users. However, the radio resources, the wireless spectrum and transmit power are limited and current wireless communication technologies are struggling to accommodate such increase in the traffic demand within the available resources. The technologies and new ideas are needed to improve the capacity and to provide high data rate. At multi-carrier wireless communication systems, Orthogonal Frequency Division Multiplexing (OFDM) has been widely adopted based on its advantage of transforming a frequency selective fading channel into a number of narrowband flat fading sub channels. Wireless multiple access technique can be realized in two ways: Orthogonal Frequency Division Multiple Access (OFDMA) [2] and Non-Orthogonal Multiple Access (NOMA) [3]. In view of increasing the spectral efficiency of the next generation networks and reduction of inter cell interference levels, NOMA technique seems to be promising [4]. All the users in NOMA use the same time and frequency resources which results in improved spectral efficiency but power is different for all users. Hence NOMA is a power domain multiplexing scheme [5]. However there are many challenges in NOMA to transmit the signal in efficient ways. One of them is to handle the power allocation of different users in efficient ways; hence we focused on power allocation technique for NOMA. Because in NOMA system, the frequency spectrum is not divided like OFDMA. Rather the frequency is same but the power is different for different users in NOMA based wireless communication system. The application of NOMA for 5G communication is being studied [6-8] and explored.

## 2. RELATED WORKS

The selection of suitable power allocation technique is crucial to make NOMA more effective. Paper [4, 5] showed the performance of NOMA by dividing the power to different users arbitrarily, 20% of total power is allocated to one user and 80% is allocated to other user without any mathematical modeling. In paper [9], the power for different users for NOMA have been also done arbitrarily, there is no specific formulation or

# ANDROID BASED WS SECURITY AND MVC BASED UI REPRESENTATION OF DATA

Suren Ku. Sahu<sup>1</sup>, Sushruta Mishra<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Engineering College)

<sup>2</sup>(Computer Science & Engineering, Gandhi Engineering College)

## ABSTRACT:

Google's Android is open source; Programmable software framework is subject to typical Smartphone attacks. Such attacks can make the phone partially or fully unusable, cause unwanted changes. While accessing data over web services there should be security mechanisms like encryption of data on server side and decryption using key on client side so that attacks can cause minimal damage to device and data integrity

In the second part we have tried to implement here is that representation of data in UI in MVC architecture so that data can be separated from the representation details and user can view data in a manner whichever gives him/her comfort in analyzing the data.

## 1. INTRODUCTION

Android is a software stack for mobile devices that includes an operating system, middle-ware and key applications. The Android SDK provides the means and APIs necessary to begin developing applications on the Android platform using the Java programming language. As an operating system for mobile devices and embedded systems, Google's Android—an open source framework—is subject to attacks. These attacks impact users of these sophisticated systems adversely and steal their private information and in some cases damage them. These threats to mentioned sophisticated systems are growing day by day as market for smart-phones is subject to grow over the time. It is estimated that smart-phone viruses can update themselves in less time than time taken by viruses to evolve for traditional computer systems. Thus; the challenge in ensuring smart-phone security is becoming similar to that confronting the traditional computer systems.

So far, limited numbers of users of smart-phone has limited the scale and impact of attacks on smart-phones. But it will increase in years to come. Thus, hackers can gain access to the operating system code.

Again, to represent data in an Android application method employed is very simple and is subject to attacks. But is data is separated from its representation to users then even if representation get manipulated data at server can be safe

# IMPLEMENTING HIERARCHICAL CLUSTERING METHOD FOR MULTIPLE SEQUENCE ALIGNMENT AND PHYLOGENETIC TREE CONSTRUCTION

Sudhansu Bisoyi<sup>1</sup>, Sunil Panigrahi<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Engineering College)

<sup>2</sup>(Computer Science & Engineering, Gandhi Engineering College)

## ABSTRACT

In the field of proteomics because of more data is added, the computational methods need to be more efficient. The part of molecular sequences is functionally more important to the molecule which is more resistant to change. To ensure the reliability of sequence alignment, comparative approaches are used. The problem of multiple sequence alignment is a proposition of evolutionary history. For each column in the alignment, the explicit homologous correspondence of each individual sequence position is established. The different pair-wise sequence alignment methods are elaborated in the present work. But these methods are only used for aligning the limited number of sequences having small sequence length. For aligning sequences based on the local alignment with consensus sequences, a new method is introduced. From NCBI databank triticum wheat varieties are loaded. Phylogenetic trees are constructed for divided parts of dataset. A single new tree is constructed from previous generated trees using advanced pruning technique. Then, the closely related sequences are extracted by applying threshold conditions and by using shift operations in the both directions optimal sequence alignment is obtained.

## General Terms

Bioinformatics, Sequence Alignment

## KEYWORDS

Local Alignment, Multiple Sequence Alignment, Phylogenetic Tree, NCBI Data Bank

## 1. INTRODUCTION

Bioinformatics is the application of computer technology to the management of biological information. It is the analysis of biological information using computers and statistical techniques; the science of developing and utilizing computer databases and algorithms to accelerate and enhance biological research. Bioinformatics is more of a tool than a discipline, the tools for analysis of Biological Data.

In bioinformatics, a multiple sequence alignment is a way of arranging the primary sequences of DNA, RNA, or protein to identify regions of similarity that may be a consequence of functional, structural, or evolutionary relationships between the sequences. Aligned sequences of nucleotide or amino acid residues are typically represented as rows within a matrix. Gaps are inserted between the residues so that residues with identical or similar characters are aligned in successive

# FPGA ARCHITECTURE FOR FACIAL-FEATURES AND COMPONENTS EXTRACTION

Sunil Panigrahi<sup>1</sup>, Suren Ku. Sahu<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Engineering College)

<sup>2</sup>(Computer Science & Engineering, Gandhi Engineering College)

## ABSTRACT

Several methods for detecting the face and extracting the facial features and components exist in the literature. These methods are different in their complexity, performance, type and nature of the images and the targeted application. The facial features and components are used in security applications, robotics and assistance for the disabled. We use these components and characteristics to determine the state of alertness and fatigue for medical diagnoses. In this work we use plain color background images whose color is different from the skin and which contain a single face. We are interested in FPGA implementation of this application. This implementation must meet two constraints, which are the execution time and the FPGA resources. We have selected and have associated a face detection algorithm based on the skin detection (using the RGB space) with a facial-feature extraction algorithm based on tracking the gradient and the geometric model.

## KEYWORDS

Face detection, face components, face features, skin detection, RGB, gradient, implementation, FPGA

## 1. INTRODUCTION

The localization of facial features and components is an important step in many applications of security (biometrics, surveillance), robotics, assistance for disabled (face communication) and driving safety (detection of decreased alertness, fatigue). The location of these features allows the facial expressions analysis. The facial expressions consist in a temporary distortion of a facial structure. There are two types of facial structure: permanent (mouth, eyes, hair, deep wrinkles, and brow) and transient (wrinkles, swelling). We use these components and features to determine the state of alertness and fatigue for medical diagnoses.

The embedded systems for acquiring, processing and analyzing facial expressions require increasingly complex algorithms. These algorithms require computational power and a large memory space exceeding the possibilities offered by most conventional processors. The FPGA (Field Programmable Gate Array) offers a solution that combines the programming flexibility and with the specialized-architecture power. The implementation of application of acquiring, processing and analyzing the facial expressions must meet a real-time execution (the camera frame rate), while minimizing the resource consumption if we aim at low cost systems.

# ANTI-SYNCHRONIZATION OF HYPERCHAOTIC WANG AND HYPERCHAOTIC LI SYSTEMS WITH UNKNOWN PARAMETERS VIA ADAPTIVE CONTROL

Mr. SALILA MALLA<sup>1</sup>, Mrs. RASHMIPRAVA MISHRA<sup>2</sup>

<sup>1</sup>(Electronics & Communication Engineering, Capital Engineering College)

<sup>2</sup>(Electronics & Communication Engineering, Capital Engineering College)

## ABSTRACT

In chaos theory, the problem anti-synchronization of chaotic systems deals with a pair of chaotic systems called drive and response systems. In this problem, the design goal is to drive the sum of their respective states to zero asymptotically. This problem gets even more complicated and requires special attention when the parameters of the drive and response systems are unknown. This paper uses adaptive control theory and Lyapunov stability theory to derive new results for the anti-synchronization of hyperchaotic Wang system (2008) and hyperchaotic Li system (2005) with uncertain parameters. Hyperchaotic systems are nonlinear dynamical systems exhibiting chaotic behaviour with two or more positive Lyapunov exponents. The hyperchaotic systems have applications in areas like oscillators, lasers, neural networks, encryption, secure transmission and secure communication. The main results derived in this paper are validated and demonstrated with MATLAB simulations.

## KEYWORDS

Hyperchaos, Hyperchaotic Systems, Adaptive Control, Anti-Synchronization.

## 1. INTRODUCTION

Hyperchaotic systems are typically defined as nonlinear chaotic systems having two or more positive Lyapunov exponents. They are applicable in several areas like lasers [1], chemical reactions [2], neural networks [3], oscillators [4], data encryption [5], secure communication [6-8], etc.

In chaos theory, the anti-synchronization problem deals with a pair of chaotic systems called the *drive* and *response* systems, where the design goal is to render the respective states to be same in magnitude, but opposite in sign, or in other words, to drive the sum of the respective states to zero asymptotically [9].

There are several methods available in the literature to tackle the problem of synchronization and anti-synchronization of chaotic systems like active control method [10-12], adaptive control method [13-15], backstepping method [16-19], sliding control method [20-22] etc.

This paper derives new results for the adaptive controller design for the anti-synchronization of hyperchaotic Wang systems ([23], 2008) and hyperchaotic Li systems ([24], 2005) with unknown parameters. Lyapunov stability theory [25] has been applied to prove the main results of this paper. Numerical simulations have been shown using MATLAB to illustrate the results.



# Generalized Neutrosophic Soft Set

Saswati Sahoo<sup>1</sup>, Sudhansu Bisoyi<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Engineering College)

<sup>2</sup>(Computer Science & Engineering, Gandhi Engineering College)

## Abstract

In this paper we present a new concept called “generalized neutrosophic soft set”. This concept incorporates the beneficial properties of both generalized neutrosophic set introduced by A.A.Salama [7] and soft set techniques proposed by Molodtsov [4]. We also study some properties of this concept. Some definitions and operations have been introduced on generalized neutrosophic soft set. Finally we present an application of generalized neutrosophic soft set in decision making problem.

## KEYWORDS

Soft Sets, Neutrosophic Set, Generalized Neutrosophic Set, Generalized Neutrosophic Soft Set.

## 1. INTRODUCTION

In Many complicated problems like, engineering problems, social, economic, computer science, medical science...etc, the data associated are not necessarily crisp, precise, and deterministic because of their vague nature. Most of these problem were solved by different theories. One of these theories was the fuzzy set theory discovered by Lotfi, Zadeh in 1965 [1], Later several researches present a number of results using different direction of fuzzy set such as: interval fuzzy set [12], generalized fuzzy set by Atanassov [2]..., all these are successful to some extent in dealing with the problems arising due to the vagueness present in the real world ,but there are also cases where these theories failed to give satisfactory results, possibly due to indeterminate and inconsistent information which exist in belief system, then in 1995, Smarandache [3] initiated the theory of neutrosophic set as new mathematical tool for handling problems involving imprecise, indeterminacy, and inconsistent data. Several researchers dealing with the concept of neutrosophic set such as M. Bhowmik and M.Pal in [13], A.A.Salama in [7], and H.Wang in [14]. Furthermore, In 1999, a Russian mathematician (Molodtsov [4]) introduce a new mathematical tool for dealing with uncertainties, called “soft set theory”. This new concept is free from the limitation of variety of theories such as probability theory, Fuzzy sets and rough sets. Soft set theory has no problem of setting the membership function, which makes it very convenient and easy to apply in practice. After Molodtsov’s work, there have been many researches in combining fuzzy set with soft set, which incorporates the beneficial properties of both fuzzy set and soft set techniques ( see [11] [6] [8]). So in this paper we present a new model which combine two concepts: Generalized neutrosophic set proposed by A.A.Salama [7] and soft set proposed by Molodtsov in [4], together by introducing a new concept called generalized neutrosophic soft set, thus we introduce its operations namely equal, subset, union, and intersection, Finally we present an application of generalized neutrosophic soft set in decision making problem.

# Phase-Priority Based Directory Coherence for Multicore Processor

Santosh Ku. Satapathy<sup>1</sup>, Saswati Sahoo<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Engineering College)

<sup>2</sup>(Computer Science & Engineering, Gandhi Engineering College)

## ABSTRACT

As the number of cores in a single chip increases, a typical implementation of coherence protocol adds significant hardware and complexity overhead. Besides, the performance of CMP system depends on the data access latency, which is highly affected by coherence protocol and on-chip interconnect. In this paper, we propose PPB (Phase-Priority Based) cache coherence protocol, an optimization of modern directory coherence protocol. We take advantage of the observation that transient states occur in directory coherence protocol, resulting in some unnecessary transient states and stalling. PPB cache coherence protocol decouples a coherence transaction and introduces the idea of "phase" message. This phase is considered as the priority of the message. Additionally, we also add new priority-based arbitrators in on-chip network to support PPB cache coherence protocol. This mechanism in on-chip network can support effective cache access, which makes the on-chip network more efficient. Our analysis on an execution-driven full system simulator using SPLASH-2 benchmark shows that PPB cache coherence outperforms a MESI based directory, and the number of unnecessary transient states and stalling reduces up to 24%. Also it reported the speedup of 7.4%. Other advantages of this strategy are reduced delay of flits and significantly less energy consumption in on-chip network.

## KEYWORDS

Directory Cache Coherence, Chip Multiprocessors, Priority Cache Coherence

## 1. INTRODUCTION

As silicon resources becomes increasingly abundant, processor designers are able to place more and more cores on a chip with massive multicore chips on the horizon. Today's state-of-the-art general purpose chips integrate up to one hundred cores [32], while GPUs and other specialized processors may contain hundreds of execution units [24]. Commercial designs with moderate number of cores have been announced [30, 12] with shared memory architecture maintained with snoopy cache coherence protocols. Also in future generation, share memory architecture will also be the main tendency. But as the number of cores scales beyond tens, more scalable directory-based coherence protocols and on-chip interconnect (NoC) will be used.

Many coherence protocols use a subset of the classic five states MOESI model first introduced by [31]. These MOESI refer to the states of blocks in cache. Some messages need to be transferred when a cache line changes its state to another one, so transient states are needed during the transition. The speeds of different messages traverse over the NoC make the coherence protocol more complicated. For example, the GEMS [21] implementation of the MESI directory protocol – a direct descendant of the SUNfire coherence protocol – requires no less than 30 states. Another performance limitation of the protocols presented thus far is that the coherence controllers stall in several situations. In particular, the cache controllers may stall when they receive forwarded requests for blocks in certain transient states. Two examples shown in Figure 1 explain how those situations occur: in a regular implementation, for the L1 cache in P1, data message (message 3) and forward message (message 4) can come in a traverse order (message 4 comes first). In this case, the cache controller may stall this message (as shown in figure 1 (a)) or transit the state to another new one (as shown in figure 1(b)). Both of those two actions will degrade the performance of whole system.

# Optimization of Latency of Temporal Key Integrity Protocol (TKIP) Using Graph Theory and Hardware Software Co-Design

R Subba Rao<sup>1</sup>, Santosh Ku. Satapathy<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Engineering College)

<sup>2</sup>(Computer Science & Engineering, Gandhi Engineering College)

**Abstract:**

Temporal Key Integrity Protocol (TKIP) [1] encapsulation consists of multiple-hardware and software block which can be implemented either software or hardware block or combination of both. This paper aims to design the TKIP technique using graph theory and hardware software co-design for minimizing the latency. Simulation results show the effectiveness of the presented technique over Hardware software co-design.

**Keywords:**

ROBUST SECURITY NETWORK ASSOCIATION, WIRED EQUIVALENT PRIVACY, TKIP, HARDWARE SOFTWARE CO-DESIGN.

**1. INTRODUCTION**

Cryptography is a part of communication used for higher security and it is done through different algorithm in network communications. The importance of cryptography is in the field of e-commerce and other network field. User can use same algorithm with a key of long sequence and at the receiving end with the same key it is decrypted and the message of encrypted is received. Key is always changes for higher security.

**TKIP OVERVIEW**

The TKIP is a cipher suite enhancing the WEP [1] protocol on pre-RSNA hardware. TKIP modifies WEP as follows:

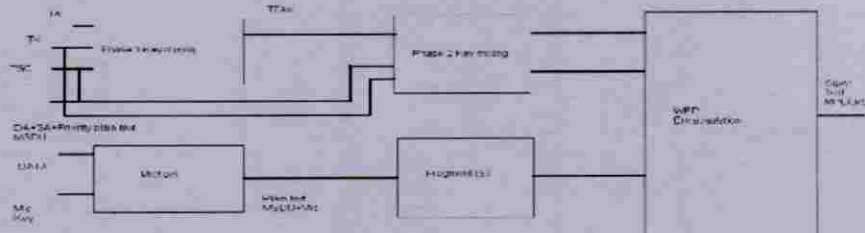


Figure 2 TKIP Block diagram

TKIP uses a cryptographic mixing function to combine a temporal key, the TA, and the TSC into the WEP seed.

**TKIP MIC[2]**

Flaws in the IEEE 802.11 WEP [2] design cause it to fail to meet its goal of protecting data traffic content from casual eavesdroppers. Among the most significant WEP flaws is the lack of a

## A Packet Drop Guesser Module for Congestion Control Protocols for High speed Networks

Narendra Kumar Rout<sup>1</sup>, Pappu Sharada<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Engineering College)

<sup>2</sup>(Computer Science & Engineering, Gandhi Engineering College)

### ABSTRACT

*Different high speed Transport layer protocols have been designed and proposed in the literature to improve the performance of standard TCP on high BDP links. They are mainly different in their increase and decrease formulas of their respective congestion control algorithm. Most of these high speed protocols consider every packet drop in the network as an indication of congestion and they immediately reduce their congestion window size. Such an approach will usually result in under utilization of available bandwidth in case of noisy channel conditions. We take CUBIC as a test case and have compared its performance in case of normal and noisy channel conditions. The throughput of CUBIC was drastically degraded from 50Mbps to 0.5Mbps when we introduced a random packet drops with 0.001 probability. When the probability of the packet drops increases then the throughput gets decreases. Indeed, we need to complement existing congestion control algorithms with some intelligent mechanisms that can differentiate whether a certain packet drop is because of congestion or channel error thus avoid unnecessary window reduction. In order to distinguish between packets drops, we have developed a k-NN based module to guess whether the packet drops are due to the congestion or any other reasons. After integrating this module with CUBIC algorithm, we have observed significant performance improvement.*

### KEYWORDS

*Congestion, Traditional TCP, Throughput, High speed Protocols, CUBIC TCP and K-NN Technique.*

### 1. INTRODUCTION

High speed networks [1] refer to the networks that usually have higher rate of data transmission such as high speed LAN and Ethernet. The rate may be varying from few Mega bit per seconds (Mbps) to Giga bit per seconds (Gbps). The common applications of high speed networks are telemedicine, videoconferencing and weather simulations etc. High speed network may perform better in the situation where the end system may regulate their flow of data for using the available network resources efficiently without more loads on the system. When there are more loads on the systems then it leads to congestion and throughput collapse. Simply high speed networks are introduced to sends a large amount of data quickly. Network congestion refers to the situation in which the capacity of a network is exceeded by the number of packets sent to it. It may mean load on the network. When this load is keep below the total capacity of the network then it is called congestion control. Congestion is possible in any system that involves waiting. In network congestion occurs because routers and switches has queue which stores the packets. We can easily understand congestion control by taking an example of congestion control in TCP. TCP [2] is an acknowledged based protocol in which a receiver must sends an acknowledgment to the sender after receiving a packet. Sender can only sent a new packet after an ACK has been received from receiver. One of the important duties of the TCP is congestion control. TCP handle congestion in three steps: slow start, congestion avoidance and congestion detection. This slow start has an exponentially increase. This increase is dictated by the size of the congestion window (maximum number of packets that can be transmitted at a particular time) which starts with one maximum segment size (maximum amount of data that a segment can hold). During the connection creation the maximum segment size is determined by using the option of the same name. When an acknowledgment is received for the send segment the size of the cwnd is increased to 1 MSS. As the name implies the window start slowly and increases exponentially.

# Model Of Solutions For Data Security In Cloud Computing

Narendra Kumar Rout<sup>1</sup>, Pappu Sharada<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Engineering College)

<sup>2</sup>(Computer Science & Engineering, Gandhi Engineering College)

## ABSTRACT

*The aim of this paper is to develop a model to ensure data stored in the cloud. Model based on situations that arise in a business environment. The model also includes individual participants and their data operations. Implementation of the model is transferred using UML. The model is divided into 7 modules. Each module is apparent from the terms of data security and described specific situations when working with data. Based on this model it is possible to convert the implementation of cloud into enterprise environments with respect to data security in the firm.*

## KEYWORDS

*Cloud Computing, Security, UML, Data Integrity*

## 1. INTRODUCTION

Storing data in the cloud can be considered quite attractive form of outsourcing focused on daily data management [1]. Despite this claim, but the real responsibility for managing the data falls within the company that owns the data. With this in mind, it is important to understand some of the causes of data corruption. Such causes advise keeping the big responsibility of a cloud services, some basic best practices for the use of secure data storage to the cloud, as well as the methods and standards for monitoring the integrity of the data regardless of data storage [2]. In order to achieve higher security and redundancy of the data stored in the cloud at the same time locally.

One of the main advantages of storing data in the cloud, is unlimited access to the data, with no limitations lies in the time and place of access [3]. This property is used by firms whose occupation takes place in various remote locations. For such companies it pays to enter into cloud solutions and, therefore, that this eliminates the burden of physical storage devices, use the same computer and multiple access data in real time (real-time reporting) [3]. In this case, it is important to create storage cloud to think about the specialty store. Although there are hundreds of cloud storage, each storage site is oriented to other requirements, such as storing communication by e-mail, store employee profiles, documentation storage projects, etc. [3]. Of course, requirement may also store all types of documents.

Data integrity is critical for each data center [4]. Monitoring integrity in the cloud need to store data in the cloud. Data corruption can occur at any level of storage. Bit rot (weakening or loss of bits of data on storage media), regulator failure, damage to reduplication metadata, tape failure to advise all examples of different types of media causing damage [5]. Metadata damage may result from any of the above errors, but also are vulnerable to software bugs out rates of hardware faults [6]. Unfortunately, side effect is that the reduplication corrupted file, the block or bit affects all parts of the data associated linked to those metadata. The truth is that the data corruption can occur anywhere in the storage environment. Data can be damaged easily migrating to another platform, thus sending data to the cloud. Data storage in cloud is data centers with hardware and software that are constantly exposed to possible damage to data [7].

# Technology Adoption In The Arabian Gulf Countries: The Case Of E-Government

Ms. Saswati Nayak<sup>1</sup>, Narendra Kumar Rout<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Engineering College)

<sup>2</sup>(Computer Science & Engineering, Gandhi Engineering College)

## ABSTRACT

*In the last decade, a lot of countries started to adopt e-government to reduce costs, improve services, save time and increase effectiveness and efficiency, and improve trust between governments and citizens. Therefore, it is very important to put e-government adoption in all countries under the light spot. In this paper, we will discuss the advantages, challenges of e-government as an international approach with a focused view on the Arabian Gulf countries. We will investigate the advantages of implementing e-government systems throughout those countries. In addition, the understanding of these advantages can help decision-makers recognize the success and risk factors in e-government adoption. Furthermore, we will discuss the challenges facing the adoption of e-government in the Arabian Gulf countries. We will also highlight some important points that need to be taken into account in all phases of the engineering process of the e-government.*

## KEYWORDS

*E-government, GCC countries, Advantages, Challenges, E-government websites*

## 1. INTRODUCTION

E-government is the digital interaction between governments, from one side, and citizens, businesses, employees, and other governments from the other side. Just like other parts of the world, the Arabian Gulf countries, or the so called Gulf Cooperation Council (GCC) countries which are: United Arab Emirates , Kingdom of Saudi Arabia, Kuwait, Kingdom of Bahrain, Sultanate of Oman, and Qatar are also interested in technology transformation by adopting e- government strategies.

Some of the Arabian Gulf countries started since more than a decade to implement and build their own governments online. The current state of e-government approaches in the Arabian Gulf countries will be explored by navigating through different success and failure case studies to figure out strength and weakness points in order to invest them to come out with some guidelines for a successful e-government implementation strategy.

A lot of challenges and drawbacks face the adoption of e-government in the Arabian Gulf countries. Those challenges have to be taken into account in the process of implementing the e- government technology. This paper discusses some main challenges the adoption of e- government in the GCC countries. It also introduces some of the website design strategies that can be applied to come out with well-designed e-government websites in terms of online information, foreign language access, communication, services provided, and use of advertisements on e-government websites.

In this paper, we will discuss the advantages of e-government as an international approach with more details on the Arabian Gulf countries. We will investigate the advantages of implementing e-government systems throughout those countries. In addition, the understanding of these advantages can help decision-makers recognize the success and risk factors in e-government adoption. Furthermore, some recommendations and best practices on how to build a well- structured e-government websites are introduced.

## 2. E-GOVERNMENT DEFINITION

## Information Retrieval from Text

DR.SATYABRATA DASH<sup>1</sup>, AKSHAYA KUMAR SATPATHY<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Institute for Technology)

<sup>2</sup>(Computer Science & Engineering, Gandhi Institute for Technology)

### ABSTRACT

*With the rapidly increasing growth in the field of internet and web usage, it has become essential to use a certain specific powerful tool, which should be capable to analyze and rank all these available reviews/opinion on the web/Internet. In this paper we have propose a new and effective approach which uses a powerful sentiment analysis procedure which will be based on an ontological adjustment and arrangements. This study also aims to understand pos tag order to get detailed observation for any review or opinion, it also helps in identifying all present positive /Negative sentiments and suggest a proper sentence inclination. For this we have used reviews available on internet regarding Nokia and Stanford parser for the purpose or pos tagging.*

### KEYWORDS

*Morphology, Association, Target, Implicit/Explicit conversion*

### 1. INTRODUCTION

Sentiment or emotion is a thought or view of viewer that he wants to express towards something. Sentiment analysis is the process of extracting these emotion or sentiments. Sentiment analysis is the process of natural language processing (NLP) to extract the emotion from the text. The main task of sentiment analysis is to identify implicit and explicit emotion from the given document. Information science follows two main aspects which are facts and opinion. Facts deals with the exact detailing and opinion can be understand as someone's' thought, review or reaction about any product which has been launched recently. Opinions compromises of positive or negative adjectives and which reflects whether the product is purchasable or not or what impact it has on masses. Sentiment Analysis can also merely be termed as Opinion mining, this study of sentiments (positive /Negative) helps to find opinion inclination and also help to form a final opinion about the product .opinion can be put under two main categories: Direct comment or Comparisons. Direct opinion is what user / review thinks about the product. E.g. "NOKIA is not an extra ordinary mobile but always comes in parallel with latest trends, where as Comparison is a form of opinion which tells us which one is better between two products etc.

In section 1 related work has been introduced. In section 2 proposed approach is discussed which include input, analyzing of reviews (POS Tagging), section 3 includes figure description, section 4 includes association/ relationship between nodes, section 5 includes conclusion.

### 2. RELATED WORK

Sentiment analysis is the process to identify the emotion which an opinion contains. Too much work has been done in this field. Sentiment analysis, emotion detection feature extraction are the fields of text mining. Feature extraction method is applied on the reviews provided by consumer. These comment could be short (one line) or it could be multiline comments. The new user could not make decision about a product or services of an organization by reading all these comments available on sites. To make decision making easy lots of work has been done. These approaches are lexicon based. Some approaches are machine learning based.

## Multi-Objective Energy Efficient Optimization Algorithm For Coverage Control In Wireless Sensor Networks

DR.SASMITA PANI<sup>1</sup>, DR.SATYABRATA DASH<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Institute for Technology)

<sup>2</sup>(Computer Science & Engineering, Gandhi Institute for Technology)

### ABSTRACT:

Many studies have been done in the area of Wireless Sensor Networks (WSNs) in recent years. In this kind of networks, some of the key objectives that need to be satisfied are area coverage, number of active sensors and energy consumed by nodes. In this paper, we propose a NSGA-II based multi-objective algorithm for optimizing all of these objectives simultaneously. The efficiency of our algorithm is demonstrated in the simulation results. This efficiency can be shown as finding the optimal balance point among the maximum coverage rate, the least energy consumption, and the minimum number of active nodes while maintaining the connectivity of the network.

### KEYWORDS

Wireless Sensor Networks, Multi-objective Optimization, Coverage, Lifetime

### 1. INTRODUCTION

Wireless Sensor Networks (WSNs) are very suited for doing the surveillance tasks. The processing and wireless communication capabilities and battery power of each sensor in this kind of networks are limited and replacing the battery of nodes is impossible in applications such as habitat monitoring and monitoring civil structures.[1-2]

Coverage is a key problem in WSNs and it focuses on determining the portion of the field that is monitored by active nodes [3-7].

For deployment of sensor nodes some of the key objectives that need to be satisfied are the portion of covered area, the number of active nodes, energy consumed by nodes, and network connectivity are key objectives in the area of WSNs. Selecting the optimal set of active nodes has been proved as an NP-complete problem in [8].

In the real world, Optimization Problems (OP) is usually with multiple attributes. Commonly, multiple objectives should be optimized simultaneously; however, there exists conflicts among the multiple objectives. For example, product quality and cost are two conflicting objectives in the production activity. In order to achieve the total optimization, some conflicting objectives should be compromised [9]. Some good algorithms have been put forward such as NSGA-II[10], PESA [11], PAES [12], SPEA2 [13], etc. NSGA has better diversity and faster convergence in solutions.

In this paper, we propose a NSGA-II based multi-objective algorithm for optimizing all of these objectives simultaneously. The efficiency of our algorithm is demonstrated in the simulation results. This efficiency can be shown as finding the optimal balance point among the maximum coverage rate, the least energy consumption, and the minimum number of active nodes while maintaining the connectivity of the network. The remaining of this paper is organized as follows: In Section 2 we present the related work related to coverage in WSNs. In Section 3 we introduce the NSGA-II algorithm briefly. Section 4 describes the proposed algorithm. Simulation results are shown in section 5 and the proposed algorithm is evaluated in this section. The paper concludes with Section presents some 6.

### 2. RELATED WORKS



# Object Segmentation Using Multiscale Morphological Operations

DR.SACHI NANDAN MOHANTY<sup>1</sup>, DR.SASMITA PANI<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Institute for Technology)

<sup>2</sup>(Computer Science & Engineering, Gandhi Institute for Technology)

## ABSTRACT

*Object segmentation plays an important role in human visual perception, medical image processing and content based image retrieval. It provides information for recognition and interpretation. This paper uses mathematical morphology for image segmentation. Object segmentation is difficult because one usually does not know a priori what type of object exists in an image, how many different shapes are there and what regions the image has. To carryout discrimination and segmentation several innovative segmentation methods, based on morphology are proposed. The present study proposes segmentation method based on multiscale morphological reconstructions. Various sizes of structuring elements have been used to segment simple and complex shapes. It enhances local boundaries that may lead to improve segmentation accuracy. The method is tested on various datasets and results shows that it can be used for both interactive and automatic segmentation.*

## KEYWORDS

*Morphology, Structuring Element, Segmentation, Edge Detection, Skeletanization*

## 1. INTRODUCTION

Humans recognize various objects in an image though the objects may vary somewhat in different viewpoints and on various transformations. Object segmentation is useful task in object recognition. The object recognition determines an object in a given set of objects in an image or image sequence. In order to perform object recognition the objects from a give image or image sequence are to be identified. For this object segmentation that is to distinguish objects from background is performed.

Object segmentation [3] is the process of partitioning a digital image into multiple segments (sets of pixels, also known as super pixels). The goal of segmentation is to simplify and/or change the representation of an image into something that is more meaningful and easier to analyze. Object segmentation is typically used to locate objects and boundaries (lines, curves, etc.) in images. More precisely, object segmentation is the process of assigning a label to every pixel in an image such that pixels with the same label share certain visual characteristics.

Some of the applications of object segmentation are content based image retrieval, machine vision, medical imaging, object detection, recognition tasks, traffic control systems, video

# Candidate solutions to improve Wireless Mesh Networks WMNs performance to meet the needs of Smart Grid applications - Survey paper

BIBHU PRASAD SAHU<sup>1</sup>, DR.SACHI NANDAN MOHANTY<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Institute for Technology)

<sup>2</sup>(Computer Science & Engineering, Gandhi Institute for Technology)

## Abstract

96% market share of existing Smart Grid network installations is wireless mesh networks [1]. The paper starts by justifying the selection of WMNs as opposed to any other communication technology based on quantifying the bandwidth/latency/QoS constraints of a number of Smart Grid applications. The main objective of this paper, however, is to discuss some optimization techniques that found in the literature and can be implemented to overcome some of the challenges currently being faced by WMNs deployment in Smart Grid's NANs. Hybrid WMN (HWMN) is proposed as an optimization on the topology level to leverage WMNs convergence. Distributed Autonomous Data Routing DADR, multigate and diversity routing are optimizations on the protocol level to minimize the down time of WMNs. Cognitive Radio is investigated as an optimization on the physical level. The paper also explores the feasibility of using Wireless Software Defined Networks WSDN to improve the overall visibility and manageability of WMNs.

## Keywords

Smart Grid, Wireless Mesh Networks, Home Area Network, Neighbor area networks, ZigBee, QoS, Hybrid wireless mesh network, Cognitive Radio, wireless software defined network, OpenFlow.

## 1. Introduction

According to the Energy Independence and Security Act of 2007, smart grid communication networks should provide secure and reliable end-to-end two-way communications [2].

Hence the success of the smart grid depends on a successful communication between the smart meters and an advanced metering infrastructure (AMI) heads. Smart Grid has many applications each with specific bandwidth, latency and QoS constraints that should be taken into consideration when selecting one communication technology in favor of another.

The first section of the paper maps the Smart Grid applications to its requirements. The second & third sections deal with Smart Grid communication Infrastructure, WMNs in particular. Section four discusses the major challenges faced by WMNs. Section five proposes the potential of deploying hybrid wireless mesh network with customized protocols to improve its performance, section six discusses the use of cognitive radio as a work around solution of the scarcity of free channels in the 2.4GHz band. Section eight proposes the use of wireless software defined networks WSDN as an approach to provide better manageability over the communication system of smart grid.

## 2. Smart Grid requirement & applications

When talking about smart grid it's important to understand that it's not a single discipline technology, it's rather a multidisciplinary technology that requires collaborative efforts from power, mechanical, civil engineering, communication and information disciplines and many

# A Robust Iris Recognition Method On Adverse Conditions

BHUPESH DEKA<sup>1</sup>, BIBHU PRASAD SAHU<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Institute for Technology)

<sup>2</sup>(Computer Science & Engineering, Gandhi Institute for Technology)

## ABSTRACT

*As a stable biometric system, iris has recently attracted great attention among the researchers. However, research is still needed to provide appropriate solutions to ensure the resistance of the system against error factors. The present study has tried to apply a mask to the image so that the unexpected factors affecting the location of the iris can be removed. So, pupil localization will be faster and robust. Then to locate the exact location of the iris, a simple stage of boundary displacement due to the Canny edge detector has been applied. Then, with searching left and right IRIS edge point, outer radii of IRIS will be detected. Through the process of extracting the iris features, it has been sought to obtain the distinctive iris texture features by using a discrete stationary wavelets transform 2-D (DSWT2). Using DSWT2 tool and symlet 4 wavelet, distinctive features are extracted. To reduce the computational cost, the features obtained from the application of the wavelet have been investigated and a feature selection procedure, using similarity criteria, has been implemented. Finally, the iris matching has been performed using a semi-correlation criterion. The accuracy of the proposed method for localization on CASIA-v1, CASIA-v3 is 99.73%, 98.24% and 97.04%, respectively. The accuracy of the feature extraction proposed method for CASIA3 iris images database is 97.82%, which confirms the efficiency of the proposed method.*

## KEYWORDS

*IRIS recognition, pupil, edge detector, wavelet.*

## 1. INTRODUCTION

In recent years, application of biometric techniques to identify the individuals in various parts of society has been in the focus of attention. Fingerprints, palm print, face, voice, iris, hand geometry, and retina, which are invariant by natural factors (e.g., temperature, aging, disease, and climate variations), are well-known biometrics. In this context, much attention has been paid to the iris as a biometric system due to its intrinsic characteristics such as its life-time stability [1], uniqueness, reliability, taking image without physical contact (i.e. the ability to register optically without any contact), and the lowest error rate based on the statistical results [2]. The iris identification system works based on the precise location of the iris region in any eye image, extraction of the distinguishing features of the iris, and matching of the iris feature vectors using distance criteria. Different approaches have already been reported in the literature to determine the identity of people through their iris. Daugman [3] in 1993, for example, proposed the first efficient iris recognition system. He located the iris boundaries using a relatively time-consuming differential operator. He calculated the convolution of complex Gabor filters and iris image to extract the image features. Then he evaluated the complex map of phasors and generated a 2048-bit iris code so as to match the iris codes with Hamming distance criteria. Although the Gabor filter-based methods show a high degree of accuracy, they, nevertheless, require a long computational time. Wildes [4, 5] then used the gradient criterion and circular Hough transform to locate the iris. Besides, he proposed the application of Laplacian operator to extract the iris images features in 4 levels of accuracy (i.e., Laplacian with 4 different resolution levels) and used the normalized correlation coefficients for matching between the patterns of images. In reference [6] after the removal of the reflections on the image, Adaboost-cascade detector has been applied

# Survey On Caching And Replication Algorithm For Content Distribution In Peer To Peer Networks

AMITAV SARAN<sup>1</sup>, BHUPESH DEKA<sup>2</sup>

<sup>1</sup>(Computer Science & Engineering, Gandhi Institute for Technology)

<sup>2</sup>(Computer Science & Engineering, Gandhi Institute for Technology)

## Abstract

*In this paper, we focus on caching and replication algorithm for content distribution in peer to peer networks. Caching and replication is a key strategy for improve the reliability, availability, and performance in peer to peer networks. This paper gives a brief introduction to caching, replication and various algorithms have been discussed and a detailed study has been performed. The comparison table shows it clearly that an algorithm satisfies the caching and replication requirement.*

## Key words

*Caching, Replication, P2P networks, Comparison of algorithm*

## 1. INTRODUCTION

P2P systems are classified into two types namely: 1). Centralized P2P system and 2). Decentralized P2P system. The paper mainly deals with decentralized P2P system. Decentralized P2P system can be classified into decentralized structured and unstructured system. In Decentralized Structured P2P architecture network topology is tightly controlled, whereas Decentralized Unstructured P2P systems do not have any control over the network topology, and placement files over the network. The most general P2P system is the decentralized unstructured system. Peers form a network among them on top of the existing inter infrastructure, which is known as the Overlay Network. The challenges facing in P2P systems are scalability, reliability, access latency, network traffic, fault tolerance, bandwidth utilization, security, and load balancing. Data replication and caching techniques are the important two services in peer to peer networks. It increases data availability by creating local or nearby available copies of popularly used items, by forwarding each query to its nearest copy; the query search latency can be effectively reduced. It also reduces communication overhead, increased system performance, achieves fault-tolerance, and enhances reliability and load balancing.[17].

1)Reliability: In p2p results in the elimination of the single point of failure that has dogged all timesharing systems. It also supports replication for all of its network services. If one of the servers becomes unavailable, a client automatically switches over to one of the replicated servers.

2)Availability: The winning feature of content distribution components are available to users at all times. Use of replication enables an administrator to do file system backups while the system is up and running. The replicated copy remains stable even while the user is changing the original file.

3)Fault Transparency or Tolerance: Components in a distributed system can fail independently. A file may be made more available in the face of failures of a file server if it appears on more than one file server. Availability is one of the main measures of the advantage of a replication algorithm.

4)Load Balancing : Replication of files in a p2p networks allows better load balancing.

5)Performance: Another advantage of a p2p system is the ability to share information with many diverse users. DFS is an efficient, extensible system. In addition, the server tracks which clients have cached copies of files, reducing the need for the client to constantly query the server, as well as reducing the network and server load.

## 2. CACHING TECHNIQUE

Caching is processed on the media chunks. The caching is done in media chunks in two ways. The first way is to cache the chunks in a predefined manner when no data regarding the popularity of the media is available. The second way caching is work working based on the popularity of the video. For example, when a server receives a request from a client, it immediately responds to the client if the object is in its local cache storage space. In cache storage space storing frequently used videos. Cache using various algorithms to store the video contents. So Caching increase the searching speed, hit rate and reduces the client waiting time and communication among peers.

# A STUDY OF OPTIMIZED GLASS FIBER STRENGTHENED POLYMERIC COMPOSITE USING TAGUCHI CONCEPT

Mr. SANJIB KUMAR DAS<sup>1</sup>, Mr. SATYAKAM ACHARYA<sup>2</sup>  
<sup>1</sup>(Mechanical Engineering, Capital Engineering College)  
<sup>2</sup>(Mechanical Engineering, Capital Engineering College)

## ABSTRACT

*Creation and assembling process manages discussion of crude materials contribution to completed item according to required dimensional details and effectively utilizing late innovation T he metal cutting fundamental pursue high metal expelling rate and best item quality the serious issue in accomplishing high efficiency and best quality is short life expectancy of hardware To improve the apparatus life numerous new material are grown so needs to fulfill the market need and serious cost for this there ought to be legitimate authority over different cost engaged with machining na medications as material cost, work cost and toolin g cost. The material expense can be constrained by utilizing extraordinary material which meets every single required property with marked down cost. The current work is centered around the influenc e of cutting pace, feed rate and profundity of cut on the delaminating harm a d surface harshness on Glass Fiber Reinforced Polymeric composite material (GFRP) During end processing. Taguchi structure method is utilized to examine the machining characters of GFRP. In this work, tests must be completed according to the Taguchi exploratory structure and L9 symmetrical exhibit was utilized to contemplate the impact of v arious mix of procedure parameter on surface quality. Investigation of change (ANOOVA) test is to be directed to decide the essentialness of each procedure parameter on Milling. This work is helpful in choosing optimum estimation of different procedures. Parameter that would limit the push power and torque as well as lessen the delimitation and improve the nature of surface machined region.*

# STUDY AND ANALYSIS OF SOLAR TRACKING GPS CONTROL SYSTEMS

Mr. SATYAKAM ACHARYA<sup>1</sup>, Mr. SARADENDU BHUJABAL<sup>2</sup>

<sup>1</sup>(Mechanical Engineering, Capital Engineering College)

<sup>2</sup>(Mechanical Engineering, Capital Engineering College)

## ABSTRACT

*There is huge in demand for energy in this decade as compared to earlier decades. Impact of over the top reliance on regular fuel is that the world is very nearly a vitality emergency. To endure such conditions sustainable power source has risen as a beam of expectation. Sunlight based vitality is accessible in overflowing gracefully on earth. Be that as it may, it is helpful just when harnessed appropriately. This paper focusses on different sun powered following frameworks which are coming along with the increases of sun powered PV cells by social affair more daylight. These frameworks were discovered to be beneficial in improving performance of PV sunlight-based boards. Execution gains are accomplished by moving sunlight based board opposite to sun beams by methods for various systems/standards*

**Key words:**, Renewable energy, Solar tracking systems, PV solar panels

## 1. INTRODUCTION

Energy is the vital element of our life. Energy is the backbone of the world economies. The current scenario of excessive consumption of fossil fuel i.e. conventional energy has brought us to imminent reality of these sources perish soon. Each passing day the problem of energy depletion has become a challenge in front of countries around the world; our approach towards being independent from these non-renewable energy sources is and goes for renewable and endless sources of energy such as renewable energy sources e.g. solar, tidal, geothermal, wind energy etc. Being a developing nation to increase the rate of development we should approach towards revolution of renewable energy. We should have developed renewable energy alternative for each non-renewable energy consumable system. But these energy sources are non-concentrated, so we also put our step towards enhancing their performance and output. These sources can be proven serving in remote areas, hilly areas where transmission of electricity might be expensive. There are many alternatives can be served competitive to conventional one. So this paper reviews such systems which are found to be effective for improving performance of solar cells.

# DEVELOPMENT OF WASTE COCONUT OIL AND EFFICIENCY, POLLUTION AND COMBUSTION CHARACTERIZATION USING DIESEL ENGINE

Mr. SARADENDU BHUJABAL<sup>1</sup>, Mr. SANJIB KUMAR DAS<sup>2</sup>

<sup>1</sup>(Mechanical Engineering, Capital Engineering College)

<sup>2</sup>(Mechanical Engineering, Capital Engineering College)

## ABSTRACT

*Energy and fuel emergency is the most noteworthy prerequisites for the presence of person. The present world uses fills from fossil as the key providers of Energy. Wrecking of non-renewable energy sources increments a worldwide temperature alteration, which prompts gigantic oil emergency hence we have to discover the eccentric vitality hotspots for fuel age. In this examination the waste coconut oil was viewed as potential assets for the biodiesel creation. The accessibility and ease of oil are appealing. Motor execution test is done for 5 examples including diesel and 4 examples of biodiesel of which B10, B20, B30 and B50 of waste coconut oil. Brake warm effectiveness and BSFC are acquired at various burdens and for all fuel tests. The outflow tests have been led with coconut oil biodiesels and their mixes with diesel oil and methanol. The test was directed with B10, B20, B30 and B50 of utilized cooking oil mixes and diesel. The outcomes from the investigations recommend that biodiesel from squander coconut oil could be a decent substitute fuel for diesel motor sooner rather than later most definitely. Taking into account equivalent motor execution and decrease in the motor emanations, it tends to be finished up and biodiesel mixes B10, B20 could be utilized in a customary diesel motor.*

# ANALYTICAL EVALUATION OF DRILLING PHASE OF HYBRID COMPOSITES USE SYSTEM TAGUCHI

Anita Pritam<sup>1</sup>, Asmeeta Jagdev<sup>2</sup>

<sup>1</sup>(Mechanical Engineering, Gandhi Engineering College)

<sup>2</sup>(Mechanical Engineering, Gandhi Engineering College)

## ABSTRACT

*Drilling is the most much of the time utilized activity of auxiliary machining for fiber-strengthened materials inferable from the requirement for joining structures. Boring of composite materials is fundamentally influenced by harm propensity of these materials under activity of push power. In penetrating activity, the nature of opening is a significant necessity for some applications. In this manner, the decision of advanced procedure parameters is fundamental for controlling the necessary opening quality. The goal of the current work is to advance procedure parameters specifically, shaft speed and feed in boring of cross breed composites. In this work, tests were done according to the Taguchi exploratory plan and a L9 symmetrical exhibit was utilized to examine the impact of different mixes of procedure parameters on gap quality. Investigation of difference (ANOVA) test was led to decide the criticalness of each procedure parameter on boring. The outcomes demonstrate that feed rate is the most huge factor affecting the push power followed by speed. Speed is the most critical factor influencing the surface harshness of the opening followed by feed. This work is helpful in choosing ideal estimations of different procedure parameters that would limit the push power as well as diminish the delamination and improve the nature of the penetrated gap. Better quality in opening geometry is accomplished by setting the ideal conditions got through the examination.*

**Key words:**, Taguchi Method, Hybrid composites, ANOVA



## ANALYSIS REVIEW VIBRATION OF TI-ALLOY GAS TURBINE BLADE ROTATION

Asmeeta Jagdev<sup>1</sup>, Asutosh Sahu<sup>2</sup>

<sup>1</sup>(Mechanical Engineering, Gandhi Engineering College)

<sup>2</sup>(Mechanical Engineering, Gandhi Engineering College)

### ABSTRACT

*Vibration examination of gas turbine sharp edge adds to advance in Aerospace and Aeronautics enterprises. Most regularly, recognizable proof and concealment of undesirable vibration is fundamental need. Methods of vibrations and regular frequencies are affected by harms brought about by outside item sway. These are progressively articulated for variation break geometry close to the foundation of cutting edge. Factual report and its post fix execution capacity are lacking in writing. It gives data on subject of dynamic nature of patch turbine cutting edges at working condition. Edge harm geometry and selection of areas can be characterized for the fastidious turbine edge helps in normal support.*

**Key words:** Ti-Alloy, Vibration Analysis, Threshold Frequency, Numerical Analysis

## EVALUATIONS AND STUDY OF PROCESS METHODOLOGY OF X65 OIL PIPELINE CRACKING STRESS CORROSION

Asutosh Sahu<sup>1</sup>, Bibhuti Bhusan Sahoo<sup>2</sup>

<sup>1</sup>(Mechanical Engineering, Gandhi Engineering College)

<sup>2</sup>(Mechanical Engineering, Gandhi Engineering College)

### ABSTRACT

*This paper presents the examinations that have been to distinguish the underlying drivers of the pipeline disappointment and to evade the reoccurrence of the disappointment. The examinations demonstrated that the pipeline erosion began after the disbandment of the Heat Shrinkable Sleeve (HSS) covering around the bigness weld. The examination demonstrated that the material properties consent to the necessities of the American Petroleum Institute (API) guidelines. It was seen that the outer surface of the pipeline lost its flexibility because of the hydrogen embrittlement, which added to split development close to the dirt nature, the dirt compaction and the area of the solid stay. The disappointment was delegated Circumferential pressure erosion splitting (C-SCC) of impartial pH structure and trans granular breaks morphology.*

**Key words:** Hydrogen Embrittlement, Pipeline Failure; Stress Corrosion Cracking;

# An Experimental Study on TiO<sub>2</sub> Based Self Cleansing Concrete by Partial Replacement of Sand By Waste Glass

Mr. BALABHADRA DEHURY<sup>1</sup>, Mr. RAJESH KUMAR SWAIN<sup>2</sup>

<sup>1</sup>(CIVIL Engineering, Capital Engineering College)

<sup>2</sup>(CIVIL Engineering, Capital Engineering College)

**Abstract** - The world is facing the problem of controlling air pollution from vehicle emissions, especially in growing urban areas. This study innovatively investigates applying the photocatalytic effect of titanium dioxide (TiO<sub>2</sub>) onto the concrete pavement to remove one of the major air pollutants, carbon monoxide. Photocatalytic compounds have the potential to remove harmful air pollutants from urban areas. There are three methods for applying TiO<sub>2</sub> -cement-based thin coating, water-based titanium dioxide solution, and a sprinkling of TiO<sub>2</sub> - to the fresh concrete surface before hardening. We have adopted a cement-based titanium dioxide solution method. The samples' environmental efficiency to remove carbon monoxide from the atmosphere was measured using a newly developed laboratory setup. This study involves using titanium dioxide as a photocatalyst in the concrete mix, which develops into a self-cleaning concrete, reducing the air pollution in the surrounding. This paper recommends the effective use of ceramic waste as a 10% replacement of fine aggregate. An experimental investigation was carried out on concrete containing TiO<sub>2</sub> in the range of 12% and 28% by the weight of M<sub>25</sub> grade of concrete. The concrete was produced, tested in compressive strength test and emission test, and conventional concrete.

**Keywords:** Ceramic waste, Titanium dioxide, self-cleansing concrete, photocatalyst.

## I. INTRODUCTION

Air pollution caused by road traffic and industry is one of the major problems in metropolitan and urban areas. Despite intensifying emission control requirements and the increased installation of emission reduction systems, air pollution, and pollution by carbon monoxide will remain a serious issue shortly. The by far largest emissions are generated by local traffic and industrial flue gases. There are many attempts to reduce emissions, from the encouragement of carpooling and public transportation to redesigning the vehicles themselves. However, there are still emissions polluting the air to a significant degree.

The photocatalyst, titanium dioxide (TiO<sub>2</sub>), is a naturally occurring compound that can decompose gaseous pollutants in the presence of sunlight. Applying TiO<sub>2</sub> to pavement can remove emission pollutants right next to the source, near the vehicles that drive on the pavement itself. However, surface coatings to traditional pavements may lose their effectiveness due to surface wear. Hence water-based titanium dioxide solution method is adopted.

When light and heat strikes the concrete's surface, catalysts (usually titanium oxides) use that energy to break down the dirt into molecules like oxygen and water. Gases float away while liquids or solids are left on the surface to be washed away by rain.

With this innovative idea, this paper aims to identify the effectiveness of applying titanium dioxide (TiO<sub>2</sub>) to the concrete pavement, thus producing a greener urban road environment.

## OBJECTIVE

Evaluate the effectiveness of titanium dioxide (TiO<sub>2</sub>) treated concrete by adopting a water-based titanium dioxide solution method. A laboratory environmental setup was used to evaluate the carbon monoxide removal efficiency due to the photocatalytic effect of the TiO<sub>2</sub>.

## SCOPE

By developing self-cleaning concrete, the concrete keeps its color far longer than traditional building materials, so it doesn't need to be replaced so often. It can also reduce general air pollution.

## USES OF SELF CLEANSING CONCRETE:

- Self-cleansing concrete can be used both in pavements and building structures.
- In building structures, self-cleansing concrete can improve indoor air quality by breathing a safe Environment and keeping the building brighter.
- In concrete pavements, it appears to be useful for reducing harmful airborne pollutants. Compared to conventional concrete.

# Literature Work Study Of Precast Concrete Connections in Seismic

Mr. RAJESH KUMAR SWAIN<sup>1</sup>, Mr. SUBHANKAR SHIBAJYOTI PUHAN<sup>2</sup>

<sup>1</sup>(*CIVIL Engineering, Capital Engineering College*)

<sup>2</sup>(*CIVIL Engineering, Capital Engineering College*)

## 1. INTRODUCTION

Structures made in Precast concrete is increasing in India. The special interest of developing any connections is to be done using commonly used construction materials, such as cast-in-place concrete.

This is an investigation of the seismic response on the precast structures due to the beam to column connection behaviour. Earthquake could damage the whole structure if it is not properly designed, especially in high seismic regions.

Connection is one of the crucial elements to limit building damage. A lot of researches have been done on monolithic reinforced concrete buildings. Although several moment resistant connections are designed through researches to sustain high intensity seismic, the connection fabrication is complex which will slow down the construction period. Besides, the actual behaviour of these connections is still vague. The understanding of the actual connection behaviour is very important, especially designed and constructed for high seismic region. Precast technology offers benefits such as reduce construction period, better quality control, cleaner and safer construction sites and others. Precast concrete means concrete which has been prepared for casting and the concrete either is statically reinforced or prestressed.

Meanwhile a precast concrete element is of a finite size and must therefore connect with other elements to form a complete structure. When two elements are connected, problems such as shrinkage, thermal or load will induced strains and cause volumetric changes. The volumetric changes cause movement between the two elements and internal friction between the two elements

## The Effectiveness of Fly Ash as a Substitute of Cement for Marine Concrete

Mr. SUBHANKAR SHIBAJYOTI PUHAN<sup>1</sup>, Mr. SMRUTIRANJAN RANJAN PRADHAN<sup>2</sup>

<sup>1</sup>(*CIVIL Engineering, Capital Engineering College*)

<sup>2</sup>(*CIVIL Engineering, Capital Engineering College*)

### Abstract

The purpose of this research is to know the effectiveness of fly ash waste in marine concrete related to the average compressive strength to be used as a substitute for cement. The test is done for concrete base material, namely: coarse aggregate (gravel), fine aggregate (sand), fly ash, cement (PC = Portland Cement), water and additional material (superplasticizer). 10 cylinders were given each treatment with (0 %, 10 %, 20 %, 25 %) percentage of fly ash addition. The samples then soaked for 26 days in seawater. At 28th day, the sample was subjected to a compression test. Based on the results of analysis and discussion, then obtained: (1) The use of 10% fly ash amount will produce the biggest compressive strength = 65.84 MPa; (2) When compared with the average compressive strength, the sample without using fly ash (0 %) has compressive power 62.02 MPa and 6.16 % increase in average compressive strength on the addition of 10 % fly ash 65.84 MPa, but in addition to 20 % fly ash there was a decrease of 9.13 % (56.36 MPa) and in addition of 25 % fly ash the average compressive strength decrease to 22.49 % (48.07 MPa).

**Keywords:** Fly Ash; Marine Concrete; Compressive Strength Value; Cement's Substitute.

### 1. Introduction

At this time, humans are never far from concrete buildings. In the field of civil engineering, concrete structures are used to construct foundations, columns, beams, plates or shell plates. All structures in civil engineering will use concrete, at least in the foundation work [1]. The term 'Marine Concrete' (MC) is reserved for concrete materials for structures in coastal areas with extreme conditions [2]. Many civil engineering buildings in the suburbs, for example, docks and retaining walls of sea waves. It is hoped that the utilization of fly ash waste will be able to answer the demand of "market" (which represent the world of construction) for ready-mix concrete demand for the more economical price but with maintained quality [3]. The purpose of this research is to know how many percentages of fly ash waste usage as the most optimum cement's substitute to produce higher compressive strength in the marine concrete making. From this research, it can be known how much the effectiveness of the use of fly ash as a substitute for cement from marine concrete, in view of the compressive strength of the concrete.

### 2. Literature Review

Concrete is made with coarse aggregate, fine aggregate (sand), Portland cement, water and, selected admixtures such as fly ash, air-entraining agents, water-reducing agents, retarders, etc. [4]. Each constituent affects the characteristics of the concrete and must be controlled in accordance with the desired composition and quantity of concrete if the final product is within the limits of uniformity, workability, and strength desired [5]. Typically, in concrete, rough aggregates and sand will occupy about 80 percent of the total volume of the final mixture. The amount of cement depends mainly on the volume of aggregates in the concrete mix [6]. Specifications for the fine aggregate fraction of concrete have been developed based on experience with natural sand for years, as it is the only type used

## Effect of L/B Ratio of Stone Column on Bearing Capacity and Relative Settlement of Sandy Soil

Mr. SMRUTIRANJAN RANJAN PRADHAN<sup>1</sup>, Mr. BALABHADRA DEHURY<sup>2</sup>

<sup>1</sup>(*CIVIL Engineering, Capital Engineering College*)

<sup>2</sup>(*CIVIL Engineering, Capital Engineering College*)

### ABSTRACT

Stone columns are one method of ground improvement having a proven record of experience. They are ideally suited for improving soft clays and silts and also for loose silty sands. In spite of the wide use of stone columns and their development in construction methods, present design methods are empirical, and only limited information about designing stone columns are available in technical codes. This study is dedicated to observe practically the effect of various parameters of stone column on the bearing capacity of sandy soils by model testing. In this study square footing has been used and model tests were conducted with varying L/B ratio of stone columns. The test results followed that relative settlement was minimum corresponding to L/B ratio (of stone column) of 2.5.

**Key Words:** Stone Column, Improvement of Soft Clays and Silts, Only Empirical Results Available, Experimental Study, Best L/B Ratio obtained.

### 1. INTRODUCTION

The stone column technique was adopted in European countries in the early 1960s. Many researchers have developed theoretical solutions for estimating the bearing capacity and settlement of foundations reinforced with stone columns. Priebe, (1995) proposed a method for estimating the settlement of foundations resting on an infinite grid of stone columns. The basic for this method is the unit cell concept.

## **Mechanical Characteristics of Normal Concrete Partially Replaced With Crushed Clay Bricks**

DR. MOHAMMED KHALID KHAN<sup>1</sup>, DR.HARIPRIYA MISHRA<sup>2</sup>

<sup>1</sup>(*CIVIL Engineering, Gandhi Institute for Technology*)

<sup>2</sup>(*CIVIL Engineering, Gandhi Institute for Technology*)

### **ABSTRACT**

The quantities of clay bricks in our nation have been on the increase significantly (approx. 45.9tonnes annually in Nairobi) without consideration for potential reuse or recycling increasing the risk to public health due to the scarcity of waste landfill. This growing problem can be alleviated if new disposal options other than landfill can be found. However, increased construction activity and continuous dependence on conventional materials of concrete are also leading to scarcity of the construction material resulting to increased construction cost. This study aims at replacing the past research work on the use of clay bricks aggregate as possible partial substitute for conventional coarse aggregate in concrete. Moreover, from the study, an optimum mechanical strength property of crushedclay bricks in concrete was identified.

Crushed clay bricks originate mostly from broken and over-burnt bricks. There were considered as partial substitute for coarse aggregate in concrete for this study. The replacement proportions were varied from 0%, 20%, 40%, 60%, 80%, and 100% by weight for natural aggregates.A detailed analysis of the results of previous work done by various researchers are presented. Testresults of this work are of importance in assessing the mechanical properties determined through splitting tensile tests, flexural tests, compressive tests and pull out force tests at 7 and 28 days.

The study indicates that considerable knowledge has been accumulated on the use of waste ceramic products, but more study needs to be done on effects of shapes and sizes of these aggregates

## Green Trends in Civil Engineering for Feasible Implementation in Buildings

DR. HARI PRIYA MISHRA<sup>1</sup>, SANTOSH KUMAR SAHOO<sup>2</sup>

<sup>1</sup>(CIVIL Engineering, Gandhi Institute for Technology)

<sup>2</sup>(CIVIL Engineering, Gandhi Institute for Technology)

**Abstract-** A Green Building is an environmentally sustainable building which is designed and constructed to operate and minimize the total environmental impacts. In this paper we are going to discuss on green technology to create a healthier environment for people to live and work, using various green building strategies. This paper concentrates on using renewable energy sources and recycling the used resources to meet the needs of present generation without depleting the resources to be met by the future generation. The various benefits offered by a green building and some tips to modify our house into a simple green building are explained in detail. The comforts that a green building provides us and how it helps in retaining the natural environment from depletion and destruction are also explained. In addition to the above a clear and detailed picture of the rating system of IGBC (Indian Green Building Council) followed in India namely the —LEED CONCEPT with its categories for rating a green building is also explained along with some of the top rated green buildings in India and its special features are also highlighted. Statics showing emergence off green building concept is discussed.

**Index Terms**— LEED, IGBC, GRIHA, green building, etc.

### I. INTRODUCTION TO GREEN BUILDING

Green Building (also known to be sustainable construction) is the practice of building structures using processes that are environment-friendly and resource-efficient throughout the lifetime of the building from design, construction, operation, maintenance, renovation till deconstruction. It uses less water, optimizes energy, helps in conserving our natural resources, generates less toxic waste and provides healthier spaces for living when compared with a conventional building.

### II. WHY BUILD GREEN ?

- The buildings which we work, live and play, protect us from nature's extremes, but they also affect our health in countless ways thereby affecting the environment also.
- As the environmental impact due to buildings is becoming more apparent in the recent years, a new field called "green building technology" has started to gain momentum.
- In order to meet the needs of the present generation without compromising for future

generations, the green building strategy helps to meet the rising demand.

- By adopting green building strategy, we can maximize economic and environmental performance.

### III. OBJECTIVES OF GREEN BUILDING

The common objective is that green buildings is to reduce the negative impact of the built environment on human health by:

- Efficient usage of energy, water, and resources
- Protecting the occupant health and improvising the employee productivity
- Reducing pollution and environmental degradation.
- Using environmentally preferable building materials and following strict specifications
- Waste reduction and recycling of materials
- Toxicity reduction
- Improving the indoor air quality which proves in healthier environments for people to live and work
- Provide natural daylight and thermal comfort.
- Smart growth and sustainable development.

### IV. RATING METHODOLOGY

A building is green or not based on its rating. Certain norms are followed by different countries to rate the buildings. This rating shows the level off eco-friendliness of the building. This is achieved by allocating points to different aspects of the buildings such as water efficiency, innovation in design, materials and resources etc.

Some of the common rating systems followed:

- BREEAM (United Kingdom)[1]
- LEED(United States and Canada)[2]
- CASBEE (Japan)[3]

Green building codes and standards, such as the International Code Council's draft International Green Construction Code, are sets of rules created by standards development organizations that establish minimum requirements for elements of green building such as materials or heating and cooling

The IGBC (Indian Green Building Council) has licensed the LEED[5] (Leadership in Energy and



# A SMART PARKING SYSTEM USING M2M COMMUNICATION

Department of Electronics and Communication Engineering

Mrs. PRANGYA PARIMITA PADHI<sup>1</sup>, Mrs. SULOCHANA NANDA<sup>2</sup>

<sup>1</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

<sup>2</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

## ABSTRACT

With an increase in the population of the vehicles in metropolitan cities, road congestion is the major problem that is being faced and the time, efforts and fuel are wasted in search of the availability of the free space in a specified parking area. Growth of Internet of Things (IoT) has paved way for integration of mobile devices, wireless communication technologies and mobile applications. To resolves these issues, an IoT based cloud integrated Smart Parking system with mobile application is being proposed. The whole system is based on machine-to-machine(M2M) communication in IoT. The proposed Smart Parking system consists of an on-site deployment of an IoT module that is used to monitor and signalize the state of availability of each single parking space. Pervasive presence of smart phone encourages users to prefer mobile application-based solutions.

**Key words:** IoT, Parking System, M2M communication, population

## 1. INTRODUCTION

In our daily lives, we all have experienced frustration due to unavailability of parking spaces in desired places or the difficulty in finding a safe and suitable parking spot. In a recent research it has been found that a driver takes nearly 8 minutes to park his vehicle because he spends more time in searching for the parking lot. This searching leads to about 30-40% of traffic congestion [1] [2]. This issue has created a concern among several sectors and the need to come up with efficient technology enabled solutions has risen. The Internet of Things (IoT) [3] permeates with the world of parking to streamline processes that deliver intelligent parking solutions, which extend and manage parking inventories. The IoT describes the network of physical objects—a.k.a. "things"— that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the Internet [4]. In this context, IoT uses wireless sensor networks to connect physical parking space infrastructures with information and communication technologies, where cloud-based smart management services are provided.

# A SMART HELMET FOR COAL MINERS

Department of Electronics and Communication Engineering,

Mr. MANORANJAN SAHOO<sup>1</sup>, Mrs. PRANGYA PARIMITA PADHI<sup>2</sup>

<sup>1</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

<sup>2</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

## ABSTRACT

Smart helmet is a device which can be used for coal miners safety. The device can be used to monitor the safety standards of the working conditions for coal miners. This device detects the temperature, humidity, harmful gas concentration, vibration. The data is analyzed and sent to the control room and the control room decides which action to take based on the parameters sent. This paper uses LoRa communication technology and GSM to send and receive information, Arduino to process the information. sensors such as MQ02, DHT11, IR sensor, vibration sensor to get the parameters. The main objective of using LoRa communication is to make sure the communication is strong even in the longer ranges where Zigbee runs out of range. The range provided by Zigbee is up to 300 meters whereas the range for LoRa can be up to 5 kms depending on the traffic in that area. The Arduino microcontroller processes the information received from the sensors and sends the information via LoRa and GSM. proper action can be taken by the control room and the workers can be evacuated or the conditions can be improved

**Key words:** LoRa communication, Coal Miners safety, Arduino, GSM, Sensors

## 1. INTRODUCTION

In earlier days, people used to work in the underground coal mines using helmets with very less protection and they used to contain a light to see the path. Due to the increase in accidents in coal mines, for example on April 5 2010 Upper Big Branch Mine disaster has occurred in the united states of America, the Safety and Health Administration (MSHA) released its statement concluding that violation of safety protocol led to a major accident. It also declared that due to harmful gases many people lost their lives. The problem would have been minimized if they had detected it at an earlier stage. Due to advancements in technologies living in the modern era, we can eradicate all such problems with ease. Considering this problem we implemented a smart helmet which can be very effective with minimal weight also with inflated security.[1] C. J. Behr, A. Kumar and G. P. Hancke, A Smart Helmet for Air Quality and Hazardous Event Detection for the Industry", IEEE, PP. 2028-2031, 2016. In this paper there are air quality for

# DESIGN OF WEARABLE ANTENNAS FOR 5G APPLICATIONS

Department of Electronics and Communication Engineering,

Mrs. SULOCHANA NANDA<sup>1</sup>, Mr. MANORANJAN SAHOO<sup>2</sup>

<sup>1</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

<sup>2</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

## ABSTRACT

Design for wearable micro strip antennas which operate at frequencies of 3.5 GHz and 28 GHz which falls under the sub-6 GHz spectrum and mm Wave spectrum of the 5G frequency bands respectively, has been proposed in this article. The antennas are mounted on a polycarbonate substrate of dielectric constant 2.57, thickness 0.5 mm and dielectric loss tangent of 0.0069. Antenna 1 resonates at a frequency of 3.466 GHz and its operating bandwidth ranges from 3.445 to 3.487 GHz (1.2%) with a peak gain value of 8.018 dBi and Antenna 2 resonates at a frequency of 28.36 GHz with its operating bandwidth ranging from 27.604 to 29.094 GHz (5.2%) and attains a peak gain value of 8.886 dBi. Within the operating bandwidth ranges of both the antennas the gain is almost constant and hence the proposed design can be used in various sectors such as healthcare, sports military etc.

**Key words:** Wearable antennas, Polycarbonate, Micro strip, Bandwidth, Resonant frequency, 5G frequency bands

## 1. INTRODUCTION

As time approaches the demand for higher speed, better reliability, large storage capacity and better connectivity for large data rates has also been increasing, which can be attained with the help of 5G technologies and can be incorporated using internet of things (IOT) [1-3]. The 5G technology can provide up to 10Gbps data rate which is approximately 10 times the data rate provided by the present 4G-LTE technologies [4]. To satisfy the demands of the growing wireless communication, the Federal Communication Commission has launched to include the high frequency bands (20 – 80 GHz) along with the sub-6 GHz frequency spectrum for the 5G communications [5]. The Body Area Network (BAN) would fall under this frequency spectrum, microelectronics has seen great advancements in this era which paves the way for BANs which can be widely used for various human requirements like precisely monitoring various human

## POSSIBLE SOLUTIONS FOR INTERFERENCE COORDINATION IN HETNETS OF LTE-A

Department of Electronics and Communication Engineering

Miss POONAM TRIPATHY<sup>1</sup>, Mr. ABHISEK GANTAYAT<sup>2</sup>

<sup>1</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

<sup>2</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

### ABSTRACT

In recent advances in cellular communication, the concept of heterogeneous networks has gained significant importance. A heterogeneous network is poised of multiple radio access technologies, architectures, transmission solutions, and base stations of varying transmission power that can interoperate, thus creating a multilayer structure. Management of interferences caused by the macro station to the low power nodes and vice versa is one of the biggest challenges in the deployment of heterogeneous networks. This paper presents a study of the mutual interference between a Macro cell and a Pico cell within LTE-A (Long Term Evolution – Advanced) framework. It is assumed that the Macro cell and the Pico cell share the same frequency channel and only the downlink (DL) performance is studied. In this paper, the possible solutions of enhanced inter-cell interference coordination (eICIC) in terms of throughput and power are analyzed.

**Key words:** HetNet, intra frequency interference, interference coordination

### 1. INTRODUCTION

In 5G networks like LTE/LTE-A, however, inter-cell interference can be controlled through coordination among base stations. This was made possible because now LTE networks have X2 interfaces defined between base stations. By exchanging interference information over these X2 interfaces, base stations now can schedule radio resources in a way that avoids inter-cell interference.

There are several Interference Coordination technologies in LTE and LTE-A:

- LTE: Inter-Cell Interference Coordination (ICIC)
- LTE-A: Enhanced ICIC (eICIC) which is an adjusted version of ICIC for HetNet, and Coordinated Multi-Point (CoMP) which uses Channel Status Information (CSI) reported by UE

## IMPLEMENTATION OF AES ENCRYPTION IP



Mr. DHEERAJ KUMAR<sup>1</sup>, Miss POONAM TRIPATHY<sup>2</sup>

<sup>1</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

<sup>2</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

### ABSTRACT

[REDACTED]

Key words: [REDACTED]

### 1. INTRODUCTION

Information Security has undergone major changes in the past and present times. Due to the advancement of the technology the whole world depends on computer, the data is stored in the computer, cloud, memory card, Hard disk drive and so on. There is a great threat to the data so, security is must for every individual and organization. Cryptography is a method to protect the data or information through codes or algorithms. The data is encrypted through cryptography

1

# MUSIC GENERATION USING WAVENET ARCHITECTURE

Department of Communication Engineering

Mr. ABHISEK GANTAYAT<sup>1</sup>, Mr. DHEERAJ KUMAR<sup>2</sup>

<sup>1</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

<sup>2</sup>(*Electronics & Communication Engineering, Capital Engineering College*)

## ABSTRACT

Music has been one of the most important things in the human life and has been there to make lives easier as soon as humanity came into existence. People started choosing this as a profession which is why they are known and valued. Now, a good taste of music or voice or having a deep knowledge of musical instruments is considered a skill. However, not everyone can have it all, what if someone has a good sense of sound mixing but not the voice needed to enter the world or the art of playing the instrument. This paper is about making music using wavenet design that allows one to express and manage different notes and tones, that is, to combine as many buttons and notes as they want and to create something that allows you to have full art. Wavenet Architecture is one of the most popular methods of deep learning. As an attempt to look into the future, this research paper discusses automatic music generation as a separate genre of music. As more and more people spend their time at home, creating, listening to, and using music in various projects becomes a major part of many lives. The initial success in music production, production and editing by Artificial Intelligence software is amazing and will accelerate this trend further. Their latest discovery comes from producing their music by putting the status quo in a Music Instrument Digital Interface (MIDI) file, which people can think of is like a music sheet that gives tough instructions to artists.

**Key words:** Deep Learning, Artificial Intelligence, wavenet, music generation

## 1. INTRODUCTION

This paper focuses on automated music production using a deep learning-based format called wavenet architecture. Advanced Learning is a subset of machine learning that deals with algorithms that promote brain structure and function called artificial neural networks. One doesn't have to be naturally well equipped with musical instruments or music to be a musician. Anyone with little experience in deep learning and a passion for music can download quality

## MANAGEMENT AND INTERCULTURAL DIALOGUE CHALLENGES AMID SECURITIZATION STEP-UP

Mrs. MINUSHREE PATTNAIK<sup>1</sup>, Miss SUSHREE BEHERA<sup>2</sup>

<sup>1</sup>(Basic Science & Humanities, Capital Engineering College)

<sup>2</sup>(Basic Science & Humanities, Capital Engineering College)

### ABSTRACT

The article has researched the intercultural communications in the context of ongoing securitization processes which is seen as a global trend in the past decades. Using the public administration method the article has analyzed the notion of an intercultural dialogue in its correlation with cultural security and the dangers of their securitization on the example of the Euro-Mediterranean Partnership. The analysis has been grounded on the assumptions that a true intercultural dialogue is bound to be a pre-condition for a general and global sustainable development of well-managed societies. It has been argued that the securitization of the dialogue has more negative than positive consequences for the stability and security of the actors involved. It has been proved that this thematic area should be taken to a new level in the official discourse in order to desecuritize the intercultural communication and relaunch the dialogue. The article highlights an urgent need for the both sides of the dialogue to shift the emphasis and find a new approach to otherness, focus on solving the urgent economic and social issues and engage all layers of society into the dialogue. The need for further research into the issues of security and intercultural communication in their interconnection and expeditious measures at all levels including international organizations, governments, and local communities is substantiated.

**Key words:** management, intercultural communication, culture, security, securitization, intercultural dialogue, Euro-Mediterranean partnership