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3.3.1: Number of research papers published per teacher in the Journals notified on UGC care list during the last five year

Index

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3.3.1: Number of research papers published per teacher in the Journals notified on UGC care list during the last five years.

Link to the journal academic year 2021-22

S. No.	Title of paper	Name of Authors	Department of the Teacher	Name of Journal	ISSN Number	Link to journal of the article
1	A review of domestic waste water (sewage) parameters and technologies	Hiradas Lillare	Department of Civil engineering	International Journal of Creative Research Thoughts	2320-2882	https://ijcrt.org/?gclid=Cj0KCQjw9deiBhC1ARIsAHLjR2AN3JcBx0EZ4LtVMy49UfvXkmpwLnRowt1FapEuItUJT6bgZ_HQceYaAqLqEALw_wcB
2	Effect of new era coagulation on dairy waste water	Hiradas Lillare	Department of Civil engineering	International Journal of Research & analytical reviews	2349-5138	https://www.ijrar.org/
3	Ground Water Quality Assesment Near MSW Dump Site At Pusad& Model Of Proposed SW dump Site At Pusad city	Hiradas Lillare	Department of Civil engineering	International Journal of Research & analytical reviews	2349-5138	https://www.ijrar.org/
4	An investigation on	Girish	Department of Civil	International Journal of	2349-	https://www.ijrar.or

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	Bacterial Concrete	Kawale	engineering	Research & analytical reviews	5138	g/
5	Review on Investigation of Bacterial Concrete	Hiradas Lillare	Department of Civil engineering	International Journal of Research & analytical reviews	2349-5138	https://www.ijrar.org/
6	Online voting system	Nazia Pathan	Department of Computer engineering	International Journal of Creative Research Thought	2320-2882	https://ijcrt.org/papers/IJCRT1807186.pdf

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4	An investigation on Bacterial Concrete	Girish Kawale	Department of Civil engineering	International Journal of Research & analytical reviews	2349-5138	
5	Review on Investigation of Bacterial Concrete	Hiradas Lillare	Department of Civil engineering	International Journal of Research &	2349-5138	

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				analytical reviews		
6	Online voting system	Nazia Pathan	Department of Computer engineering	International Journal of Creative Research Thought	2320-2882	https://ijcrt.org/papers/IJCRT1807186.pdf

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INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

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A REVIEW ON DOMESTIC WASTEWATER (SEWAGE) TREATMENT PARAMETERS AND TECHNOLOGIES

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Abstract: As a result of growing civilization and industrialization, water demand has been increased enormously. The water demand in future cannot be met if we rely only on fresh water sources. 80% of the generated wastewater meets the natural streams without any treatment, which create hazard to the ecosystem. A sewage treatment plant not only treats the wastewater, it can also make the treated wastewater available for reuse, giving it an advance tertiary treatment. STP contains various units performing complex operations. It is certainly important to understand the operational conditions and flow pattern to design a most efficient and economical plant. In this paper an attempt has been made to study various units and their operations in a sewage treatment plant.

Index Terms - Sewage, Wastewater, Treatment Plants, Treatments Technologies

I.INTRODUCTION

In India water for domestic use is generally provided to residences in urban areas by a reticulated supply, managed by a local or statutory authority. In rural and isolated locations, where potable water cannot be supplied from a reticulated supply, water may be individually sourced from ground or surface waters. Wastewaters which are then generated by domestic residences is generally collected by a reticulated sewerage system and treated in a wastewater treatment plant, or treated and disposed of on-site, where the wastewaters are generated. As India is one of the most urbanised countries in the world, the majority of domestic residences are provided with a reticulated water supply and serviced by a sewerage system managed by a local or statutory authority.

Sewage if disposed without treatment causes nuisance. Sewage treatment is the way of expelling contaminants from wastewater, essentially from domestic areas sewage. Physical, synthetic and natural procedures are utilized to expel contaminants and create treated wastewater that is more secure for the earth. A by-product of sewage treatment is generally a semi-strong waste or slurry, called sewage sludge. The sludge needs to undergo proper treatment before disposal on land or water.

In India, water is supplied at a rate of 135 lpcd in general. However 80-85% of which gets converted to domestic wastewater. The wastewater is collected through the wastewater collection infrastructure laid by the urban local body or municipal authority and taken to the nearby sewage treatment plant. Since the wastewater generation pattern varies for every hour of the day also the volume varies seasonally; special care is to be taken while calculating the flow for designing the treatment facilities. In this paper, an attempt has been made to briefly describe the various processes involved in wastewater treatment plant.

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EFFECT OF NEW ERA COAGULANT ON DAIRY WASTE WATER

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[1]Student [2]Professor, [3]Professor
[1]M-Tech. Student, Department of Civil Engineering,
[2]Swaminarayan Siddhartha Institute of Technology, Kalmeshwar, Nagpur, Maharashtra, India.

Abstract : The dairy industry is among the foremost polluting industry because it produces an outsized volume of wastewater which could adversely affect the environment. The dairy industry wastewater is characterized by high biochemical oxygen demand (BODS), chemical oxygen demand (COD), and nutrients levels. The event of new membrane high flux/rejection characteristics have increased the probabilities of water reuse and recycling up to a greater extent. The pre-treated water was skilled during a cross-flow reverse osmosis membrane system and thus the permeate water was found to possess excellent quality. This water use by the dairy is usually recycled or reused. The potential to substitute to plane coagulants partially or fully within the primary treatment of dairy wastewater. The use of water treatment sludge at dairy wastewater treatment plants would offer sustainable sludge management and cost-effective dairy wastewater treatment. We give the review of the treatment of dairy wastewater by coagulation method the effect of recent ERA coagulant on dairy wastewater.

I. INTRODUCTION

Now a day, it's vital to treat the industrial waste waters on a significant note. The massive amount of growth in industrial waste waters is to be observed with regard to increasing number of industries. The direct discharge of such industrial waste water into the environment sources creates harmful effects to humans, animals and plants. The self-purification capability of the industrial waste water is a smaller amount so as to neglect the varied pollution problems. The 2 major sources of adulterated waste water are industrial and domestic waste. Domestic sewage carries approximate 70% of waste water and remaining is carried by industries and other. More practical method is required to treat industrial waste water. During this paper, we used new era coagulant for the treatment of Dairy waste water like,

- Aluminum Chlorohydrate (ACH)
- Magnesium Chloride (MgCl2.6H2O)
- Poly Aluminum Chloride (PAC) and
- Poly-Glu

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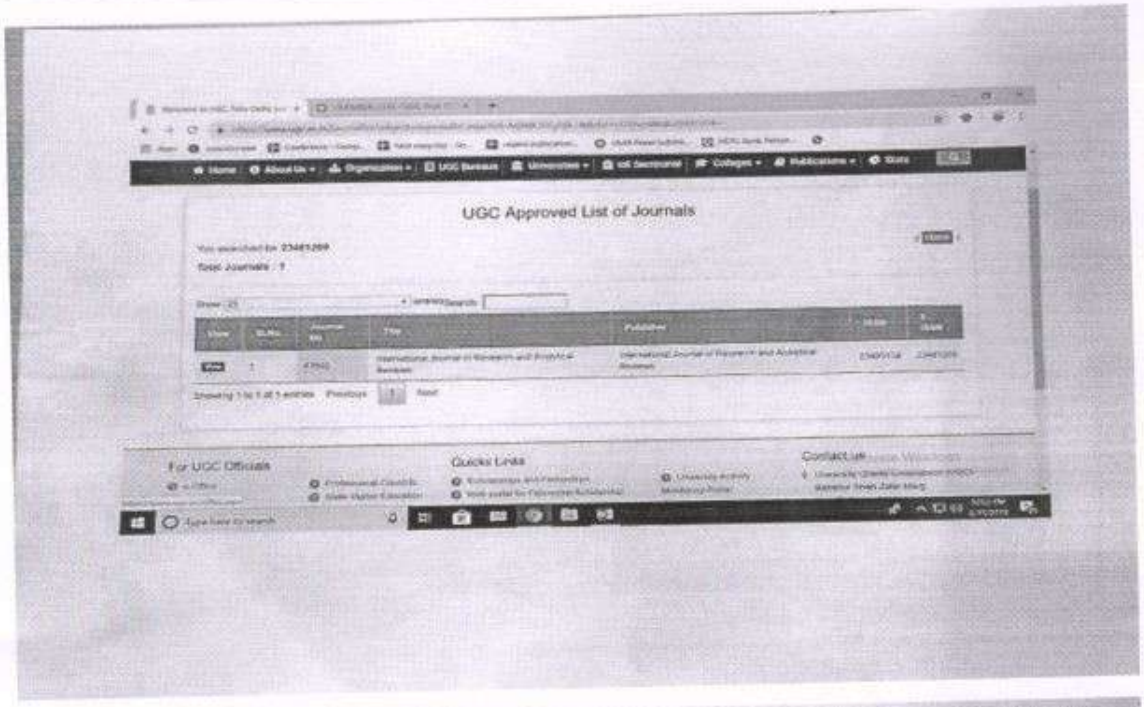

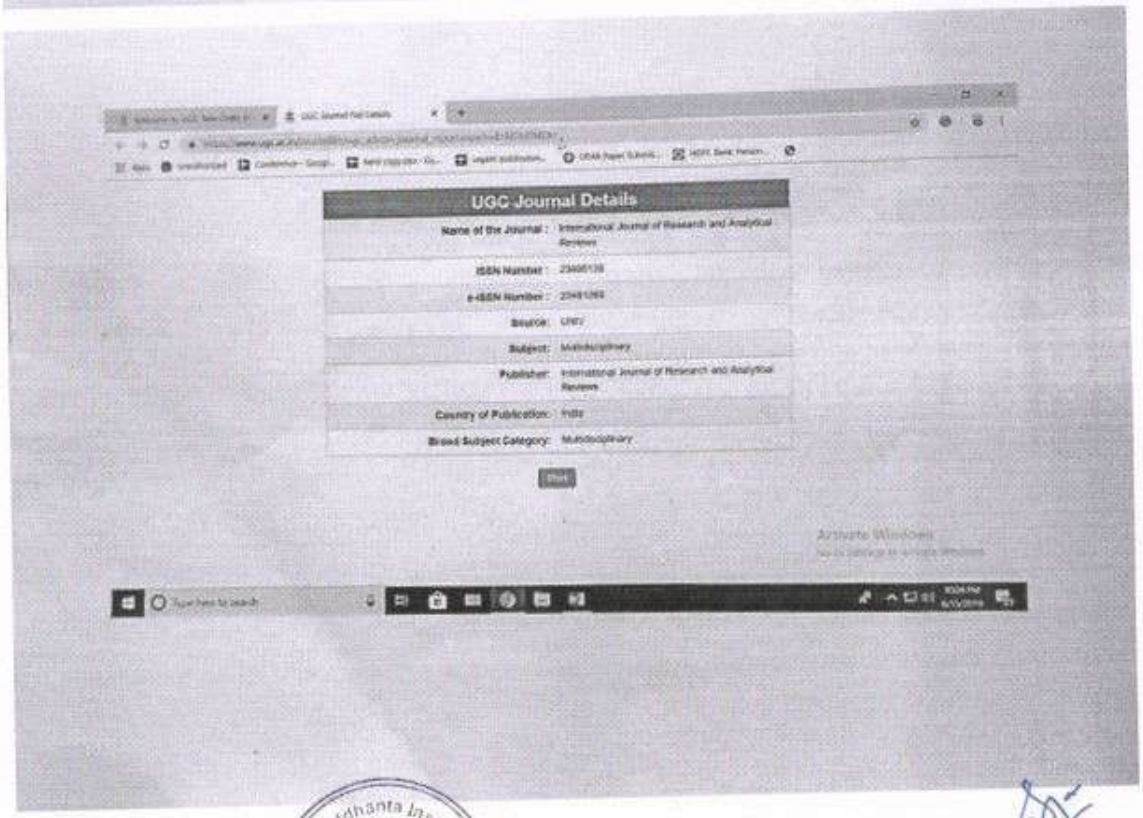

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"Ground water Quality Assessment Near MSW Dump Site at Pusad and Model of Proposed SW Dump Site at Pusad City"

[1]Md. Nadeem Siddiqui, [2]Prof. Hiradas Lilhare, [3]Prof. Akash Gupta

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[1,2,3]Civil Engineering Department,

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Abstract : The groundwater present in aquifer is being used for various purposes like domestic, industrial, and agricultural in vidarbha region. This is because of topography of this region and non-availability of major perennial rivers as a source of water in this region. Hence the groundwater is exploited to very great extent for various purposes. The major source of groundwater contamination is due to nonengineer disposal of industrial waste, MSW and other hazardous waste. The leachate generated due to such a waste especially during rainy seasons joins aquifer and pollute groundwater to very great extent. This polluted groundwater may cause a hazardous effect on human life as well as agricultural product utilized by them. The physical parameters such as color, smell, turbidity etc. are considered to determine the quality of ground water. The chemical parameter such as a pH, TDS, total hardness, SiO2, Na, K, Cl, Fe, Arsenic, and metallic trace element are consider to decide the ground water quality. Special consideration can be given to other heavy metal depending on the geology and mining, industrial, agricultural activities present in the region.

Keywords – MSW, pH, TDS, total hardness, Landfills, Leachate

I. INTRODUCTION

The major source of groundwater contamination is due to nonengineer disposal of industrial waste, MSW and other hazardous waste. The leachate generated due to such a waste especially during rainy seasons joins aquifer and pollute groundwater to very great extent. This polluted groundwater may cause a hazardous effect on human life as well as agricultural product utilized by them. It necessitates the groundwater quality assessment time to time to ensure safe and healthy life of human being. In surrounding Pusad city no chemical or fertilizer industry is there except non-engineered dumping of MSW, which is the main source of groundwater contamination. In this study a groundwater assessment was done near the MSW site of Pusad city. The quality of any waters either surface or ground water can be identified based on the physical, chemical and biological properties of water. On the basis of origin of ground water i.e. rain water or lateral flow, and the types of aquifer, the geological properties of aquifer and top soil of the water properties can varies.

The physical hazards are the dissolved solids and suspended solids. As the public health concern, the ground water should be free from physical and chemical hazards. The people in and around the dumping site are depending upon the ground water for drinking and other domestic purposes. The soil pollution arises due to the leaching of wastes from landfills. Fertilizers and pesticides from irrigation fields are also causing substantial contribution to groundwater contamination. Landfills are usually either placed above ground or contained within quarry and pits. One of the common sources of groundwater contamination is non-engineered, unplanned and poorly maintained land filled site of municipal solid waste. The study of quality, quantity, and management of solid waste generated at BNCOE Campus Pusad is to be carried out. It is found that the Management of SW is going through a critical condition in college campus. The disposal of SW is carried out by improper methods in college campus. The Report suggests some engineered method for disposal of solid waste.

1.1 Necessity of groundwater assessment: Large amounts of solid waste produced in and around Pusad city are dumped nearer to solid waste landfill site near to Indira Nagar. This municipal solid waste normally termed as "garbage" is an inevitable byproduct of human activity which is disposed through dumping. Solid waste land filling is the most common method of solid waste disposal. The landfill site nearer to Pusad are open dumpsites, because the open dumpsites are low operating costs and lack of expertise and equipment provided in systems for leachate collections. Open dumps are unsightly, unsanitary and generally smelly. As the groundwater contamination is due to percolation of leachate through interconnected voids of the soil and joining this leachate to aquifer of that reason thereby this investigation program was focused. A water pollutant is a chemical or physical substance present in it at the excessive levels capable of causing harm to living organisms.

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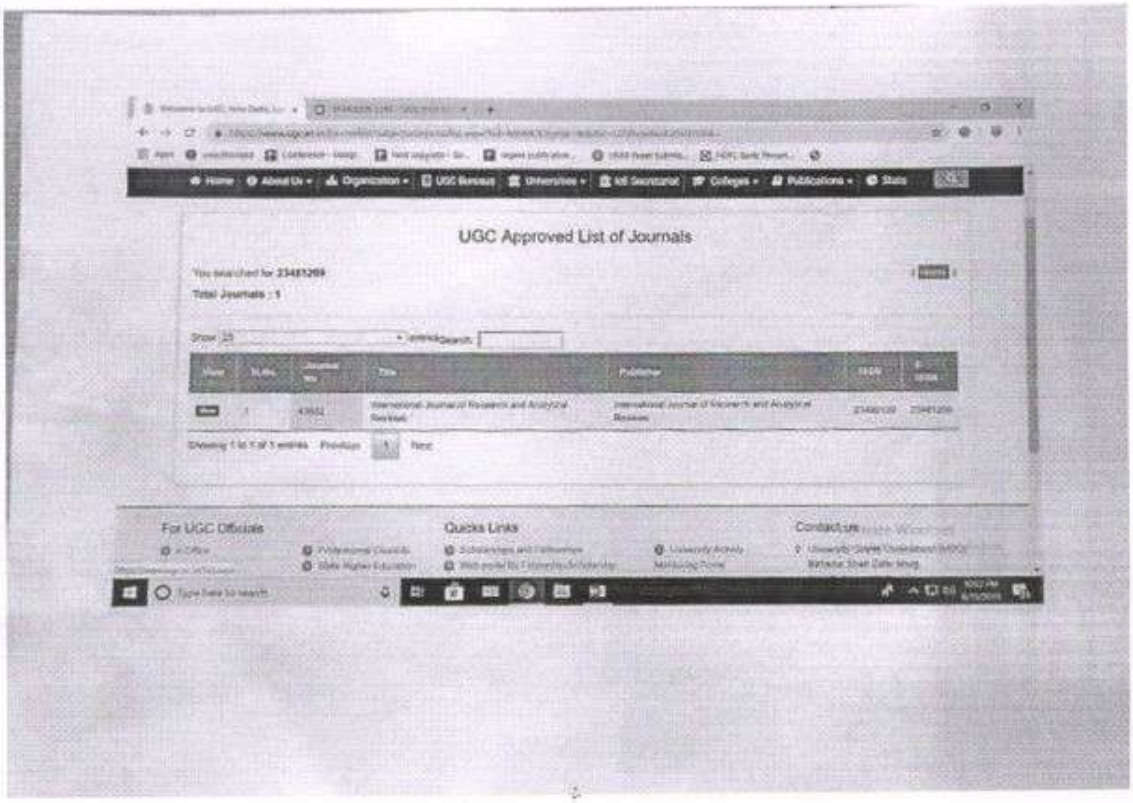

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"AN INVESTIGATION OF BACTERIAL CONCRETE"

[1]Swadeep M. Shambharkar, [2]Shivkumar S. Netragaonkar, [3]Shaharukalli U. Saiyyad, [4]Akshay G. Khokle,
[5]Prof. Girish Kawale

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[5]Prof. Girish Kawale, Guide, Civil Engineering Department, SwaminarayanSiddhanta Institute Of Technology, Nagpur, Maharashtra, India

Abstract: Cracking in concrete is the main concern throughout the structures because it causes loss of strength with time. Hence a special type of environmental free solution is to be made for maintenance purpose. Therefore a bacterial concrete is prepared. However, the drawback of this material is that it easily cracks due to its low tensile strength, & due to temperature expansion, contraction, whereas the creep & shrinkage also produce cracks. While bigger cracks deteriorate structural integrity, also hair-line cracks may result in durability problem. In this study we will discuss about the self-healing process of concrete is process by which the cracks obtained in the body of concrete get repaired by itself or it required some external help to complete self-healing activity. The bacterial species called Bacillus subtilis for increasing the strength of concrete and decreasing the porosity at 28 Days.

Though these species are eco-friendly and does not cause any harm to human and use for improving the resistance of concrete when exposed to alkaline, sulfate and freeze-thaw environments. This paper mainly comprises of activation of bacteria and focuses on strength of bacteria concrete with normal concrete and also filling of cracks.

Keywords **- Self-healing concrete, Creep & shrinkage, hydrolyze urea, Bacillus subtilis**

I. INTRODUCTION

Cracks often occur in concrete because of the low tensile strength of this material. Rapid crack-healing is necessary since it is easier for aggressive substances to ingress into concrete through cracks than through the concrete matrix. It is known that it is costly to inspect, monitored repair cracks. Moreover, some of the repair methods currently used is not so sustainable [Neville 1996]. Therefore, it would be desirable if concrete cracks could be healed autonomously by releasing healing agents inside the matrix when cracks appear. In this research, an environment-friendly and autonomous crack repair technique is explored. Previous research has shown that Bacillus sphaericusbacteria are able to precipitate calcium carbonate (CaCO3) on their cell constituents and in their micro-environment by conversion of urea (CO (NH2)2) into ammonium (NH4+) and carbonate (CO32-). The bacterial degradation of urea locally increases the pH and promotes the microbial deposition of calcium carbonate in a calcium rich environment. Through this process, the bacterial cell is coated with a layer of calcium carbonate [Dick et al. 2006].The aim of our study is to use this bio-precipitated CaCO3 to heal cracks in concrete. A calculation showed that precipitation of CaCO3 is not enough to fill wide concrete cracks completely. So its solution is to restrict the wide expansion of the crack i.e. by using self-healing concrete. Self-healing concrete could solve the problem of concrete structures deteriorating well before the end of their service life.Concrete is still one of the main materials used in the construction industry, from the foundation of buildings to the structure of bridges and underground parking lots. Traditional concrete has a flaw, it tends to crack when subjected to tension.A healing agent that works when bacteria embedded in the concrete convert nutrients into limestone has been under development at the Civil Engineering and Geosciences Faculty in Delft since 2006.

The project is part of a wider programmer to study the self-healing potential of plastics, polymers, composites, asphalt and metals as well as concrete

The cracks obtained in the hardened concrete due to:-

1. Expansion & contraction of structure
2. Creep & shrinkage
3. Tensile stresses

Due to formation of crack, Ingress water and chemicals can cause premature matrix degradation and corrosion of embedded steel reinforcement.

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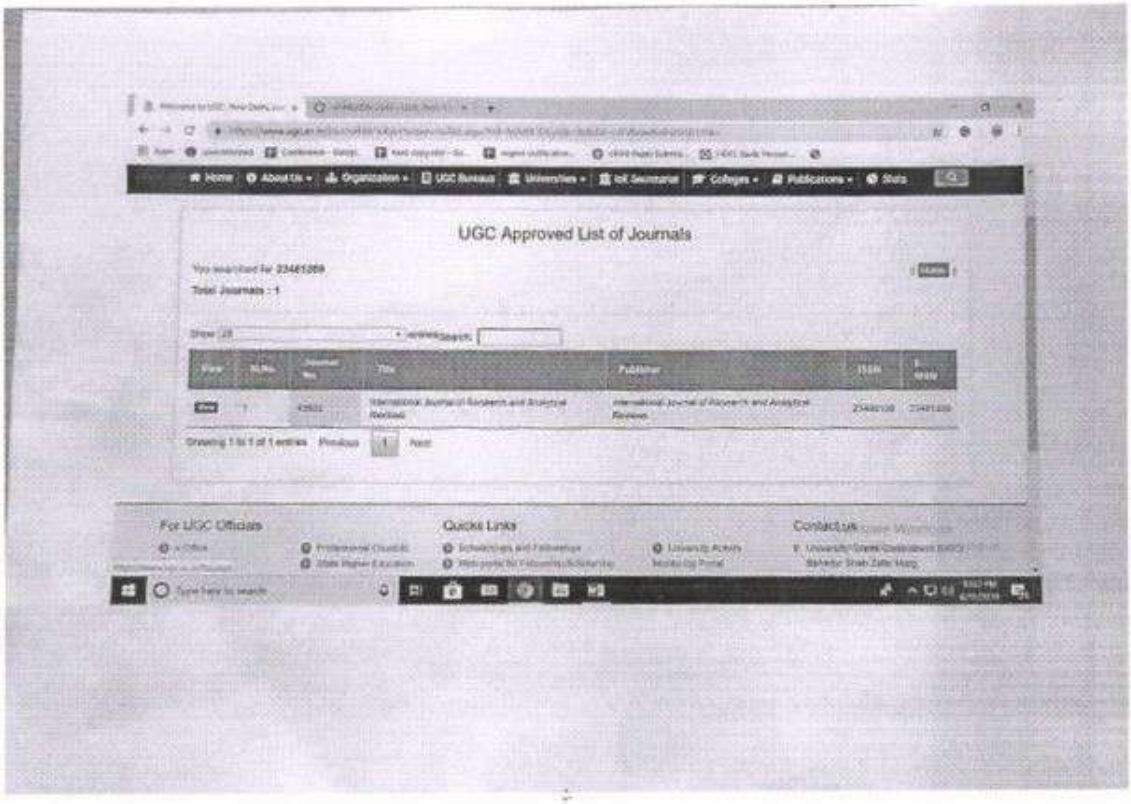

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"REVIEW ON INVESTIGATION OF BACTERIAL CONCRETE"

[1]Ashish W. Khadilkar, [2]Ranjeet U. Yesankar, [3]Pirti Tayade, [4]Prof. Girish Kawale, Prof. Hiradas G. Lilhare

[1,2,3] UG Student, Civil Engineering Department, SwaminarayanSiddhanta Institute Of Technology,Nagpur, Maharashtra, India

[4]Assistant Professor, Civil Engineering Department, SwaminarayanSiddhanta Institute Of Technology, Nagpur, Maharashtra, India

Abstract - Cracking in concrete is the main concern throughout the structures because it causes loss of strength with time. Hence a special type of environmental free solution is to be made for maintenance purpose. Therefore a bacterial concrete is prepared. However, the drawback of this material is that it easily cracks due to its low tensile strength, & due to temperature expansion, contraction, whereas the creep & shrinkage also produce cracks. While bigger cracks deteriorate structural integrity, also hair-line cracks may result in durability problem. In this study we will discuss about the self-healing process of concrete is process by which the cracks obtained in the body of concrete get repaired by it or it required some external help to complete self-healing activity. The bacterial species called Bacillus subulis for increasing the strength of concrete and decreasing the porosity at 28 Days. Though these species are eco-friendly and does not cause any harm to human and use for improving the resistance of concrete when exposed to alkaline, sulfate and freeze-thaw environments. This paper mainly comprises of activation of bacteria and focuses on strength of bacteria concrete with normal concrete and also filling of cracks.

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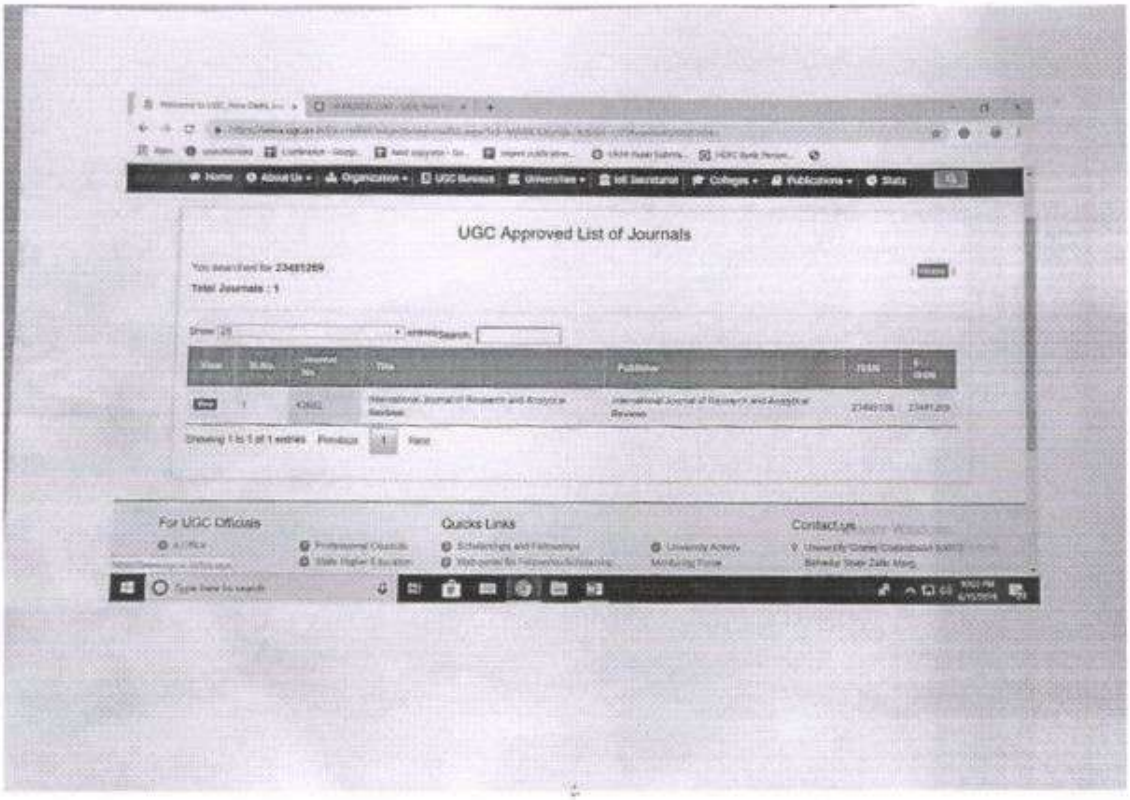

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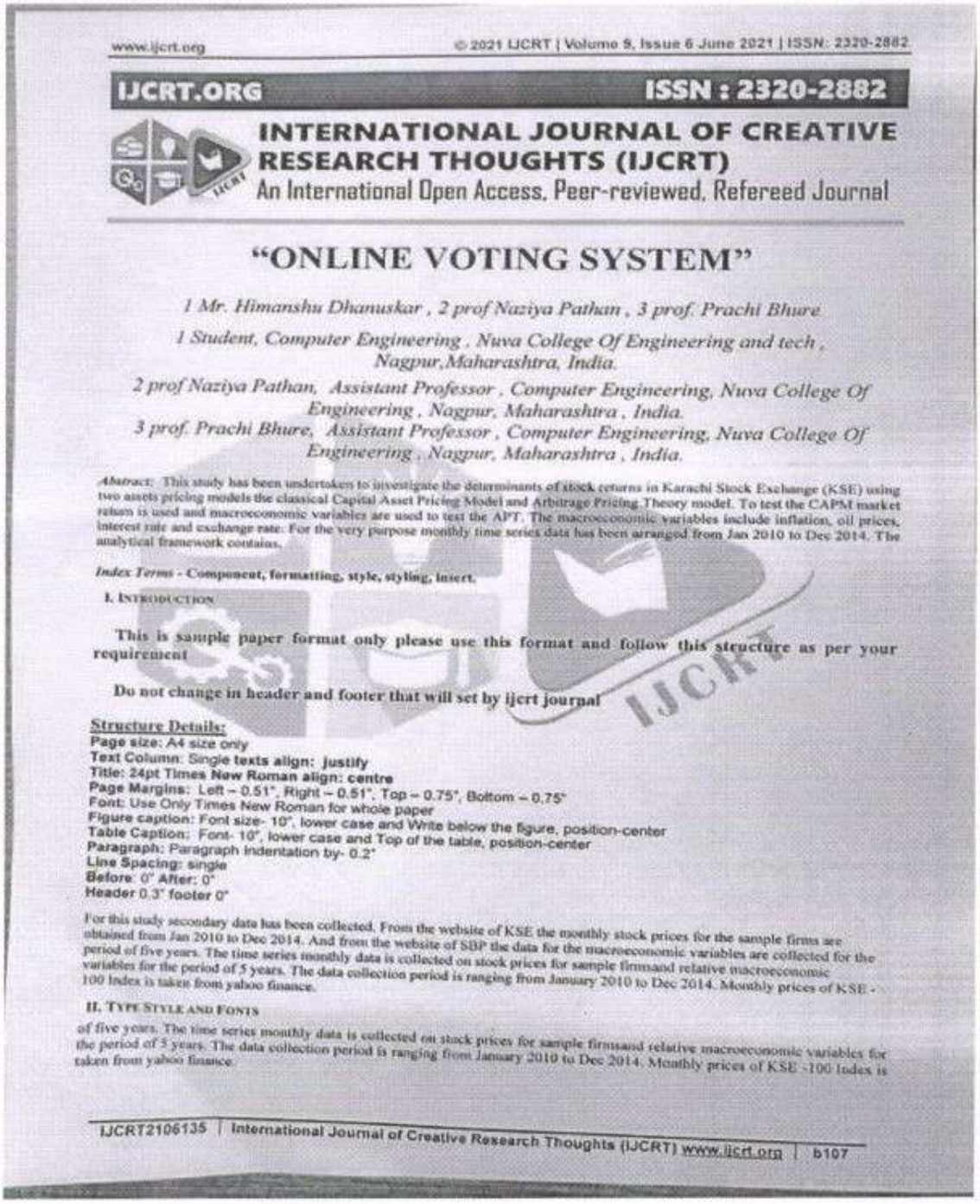

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"ONLINE VOTING SYSTEM"

1 Mr. Himanshu Dhanuskar , 2 prof Naziya Pathan , 3 prof. Prachi Bhure

1 Student, Computer Engineering , Nuva College Of Engineering and tech , Nagpur,Maharashtra, India.

2 prof Naziya Pathan, Assistant Professor , Computer Engineering, Nuva College Of Engineering , Nagpur, Maharashtra , India.

3 prof. Prachi Bhure, Assistant Professor , Computer Engineering, Nuva College Of Engineering , Nagpur, Maharashtra , India.

Abstract: This study has been undertoken to investigate the determinants of stock returns in Karachi Stock Exchange (KSE) using two assets pricing models the classical Capital Asset Pricing Model and Arbitrage Pricing Theory model. To test the CAPM market return is used and macroeconomic variables are used to test the APT. The macroeconomic variables include inflation, oil prices, interest rate and exchange rate. For the very purpose monthly time series data has been arranged from Jan 2010 to Dec 2014. The analytical framework contains.

Index Terms - **Component, formatting, style, styling, insert.**

I. Introduction

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For this study secondary data has been collected. From the website of KSE the monthly stock prices for the sample firms are obtained from Jan 2010 to Dec 2014. And from the website of SBP the data for the macroeconomic variables are collected for the period of five years. The time series monthly data is collected on stock prices for sample firmsand relative macroeconomic variables for the period of 5 years. The data collection period is ranging from January 2010 to Dec 2014. Monthly prices of KSE - 100 Index is taken from yahoo finance.

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S. No.	Title of paper	Name of Authors	Department of the Teacher	Name of Journal	ISSN Number	Link to journal of the article
1	Water pollution - Sources ,effects and control	Arif Khan	Department of Civil engineering	International Journal for Scientific research & Development	2278-3078	https://www.ijsrd.com/
2	Stabilization of MSW by Using Cowurine	Arif Khan	Department of Civil engineering	International Journal of Innovative technology & Exploring Engineering	2278-3075	https://www.ijitee.org/
3	Data analysis with clustered based using Hadoop	Prachi Bhure	Department of Computer engineering	International Journal for engineering Applications & Technology	2321-8134	http://www.ijfeat.org/

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Water Pollution-Sources, Effects and Control

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Abstract— The data regarding water pollution and human health was obtained and compiled through a thorough review of various published research articles of international reputed journal and relevant books. Water covers about 70% Earth's surface. Safe drinking water is a basic need for all humans. The WHO reports that 80% diseases are waterborne. Industrialization, discharge of domestic waste, radioactive waste, population growth, excessive use of pesticides, fertilizers and leakage from water tanks are major sources of water pollution. These wastes have negative effects on human health. Different chemicals have different affects depending on their locations and kinds. Bacterial, viral and parasitic diseases like typhoid, cholera, encephalitis, poliomyelitis, hepatitis, skin infection and gastrointestinal are spreading through polluted water. It is recommended to examine the water quality on regular basis to avoid its destructive effects on human health. Domestic and agriculture waste should not be disposed of without treating.

Keywords: Water pollution, sources of water pollution, harmful chemicals, infectious diseases

I. INTRODUCTION

Water is one of the renewable resources essential for sustaining all forms of life, food production, economic development, and for general wellbeing. It is impossible to substitute for most of its uses, difficult to de pollute, expensive to transport, and it is truly a unique gift to mankind from nature. Water is also one of the most manageable natural resources as it is capable of diversion, transport, storage, and recycling. All these properties impart to water its great utility for human beings. The surface water and groundwater resources of the country play a major role in agriculture, hydropower generation, livestock production, industrial activities, forestry, fisheries, navigation, recreational activities etc. The freshwater ecosystems of the world comprise only about 0.5% of the earth's surface and have a volume of 2.84x105 Km3. Rivers constitute an insignificant amount (0.1%) of the land surface. Only 0.01% of the waters of the earth occur in river channels. Inspite of these low quantities, running waters are of enormous significance (Wetzel, 2001). India receives annual precipitation of about 4000 km3, including snowfall. Out of this, monsoon rainfall is of the order of 3000 km3. Rainfall in India is dependent on the south-west and north-east monsoons, on shallow cyclonic depressions and disturbances and on local storms (Kumar et. al., 2005). Most of it takes place under the influence of south-west monsoon between June and September except in Tamil Nadu, where it is under the influence of north-east monsoon during October and November (Kumar et. al., 2005). India is gifted with river system comprising more than 20 major rivers with several tributaries. Many of these rivers are perennial and some of them are seasonal. Although India occupies only 3.29 million km2 geographical area, constituting 2.4% of the world's land area, it supports over 15% of the world's population. The population of India as on 1st March 2001 stood at 1,027,015,247 persons. Thus, India supports about 1/6th of world population, 1/50th of world's land and 1/25th of world's water resources (Water Management Forum, 2003).

In the last few decades, there has been a tremendous increase in the demand for freshwater due to rapid growth of population and the accelerated pace of industrialization (Ramakrishnaiah et al., 2009). Human health is threatened by most of the agricultural development activities particularly in relation to excessive application of fertilizers and unsanitary conditions (Okeke and Igboanua, 2003). Anthropogenic activities related to extensive urbanization, agricultural practices, industrialization, and population expansion have led to water quality deterioration in many parts of the world (Baig et al. 2009, Mian et al., 2010, Wang et al., 2010). In addition, deficient water resources have increasingly restrained water pollution control and water quality improvement (Bu et al., 2010). Water pollution has been a research focus for government and scientists. Therefore, protecting river water quality is extremely urgent because of serious water pollution and global scarcity of water resources.

II. SOURCES OF WATER POLLUTION

Water pollution can occur from two sources. 1. Point source and 2. Non-point source (Table 1). Point sources of pollution are those which have direct identifiable source. Example includes pipe attached to a factory, oil spill from a tanker, effluents coming out from industries. Point sources of pollution include wastewater effluent (both municipal and industrial) and storm sewer discharge and affect mostly the area near it. Whereas non-point sources of pollution are those which arrive from different sources of origin and number of ways by which contaminants enter into groundwater or surface water and arrive in the environment from different non identifiable sources. Examples are runoff from agricultural fields, urban waste etc. Sometimes pollution that enters the environment in one place has an effect hundreds or even thousands of miles away. This is known as transboundary pollution. One example is the radioactive waste that travels through the oceans from nuclear reprocessing plants to nearby countries. Water pollutants may be

1) Organic and
2) Inorganic water pollutant.

Characteristics of point and nonpoint sources of chemical inputs to receiving waters (adapted from Carpenter et al., 1998).

Point Sources	Nonpoint Sources
- Wastewater effluent (municipal and industrial) - Runoff and leachate	- Runoff from agriculture (including return flow from irrigated agriculture) - Runoff from pasture and range

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Stabilization of MSW by using Cowurine

Aboli V. Chavhan, Arif Khan

Abstract: This paper inspected the fluctuation which happens in key boundaries like pH, temperature, dampness content, natural carbon, nitrogen, phosphorous and so on during the 30 days standard observing of fertilizing the soil process.5 kg of city strong waste, old fertilizer, straw and soil, was blended in with 5%, 10%, 15% of cow urine of 3 kg civil strong waste for treating the soil. Treating the soil was finished by utilizing sixteenth containers model composter made up with legitimate air circulation and waste office and was kept in semi sun beams condition, Ph running 7.6 to 8.9 in the main stage, Temperature ascends from the primary day of process and become 55°C on18 day. Dampness content in manure was insecure all through the procedure because of changing microbial populace. The NPK substance of conclusive fertilizer are discover after finding the aftereffects of NPK got from fertilizing the soil treatment given to MSW and Cow urine are demonstrate that consolidated fertilizing the soil are an appealing technique for the executives of city strong waste.

Keywords: Cow urine, Composting, Municipal Solid Waste,

I. INTRODUCTION

Because of expanding populace just as modern and monetary turn of events, the yield of the civil strong squanders (MSW) has been expanding in India. Then again, sterilization landfill would involve a ton of terrains and lead to two-advance arrangement by less created innovation. Strong waste administration is viewed as one of the most genuine ecological issues going up against urban zones in creating nations. Fertilizing the soil of MSW decreases the volume of the squanders; germination of weeds in agrarian fields and crushes foul mixes .In satisfactory assortment and uncontrolled removal of strong squanders brings about a genuine danger to the occupants just as a domain. Civil strong waste and its administration is a major worry for India nowadays. Metropolitan Solid waste administration is taken as one of the consuming issue. Among strong waste, over 80% is natural. Thus successful Composting can be the most ideal alternative for its administration. Dairy animals pee (Cow urine) has high nitrogenous manure an incentive than cow fertilizer. Supplement estimation of pee can be caught through natural treating the soil. Pee applied fertilizer quickened the treating the soil procedure just as upgrade the nature of the manure. In spite of the manure estimation of dairy animals pee, it has a few difficulties to supplant synthetic compost in the farmland. Urea in cow pee debase quickly to the gases NH3 and CO2 .

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Cow pee is excessively solid to apply straightforwardly in the field and ought to be weakened so as to apply legitimately in the plants. Dairy animals pee is in fluid structure and hence isn't anything but difficult to ship it as of substance compost. Squander recuperation, for example, reusing and fertilizing the soil is a choice of diminishing the waste adds up to be arranged. Fertilizing the soil MSW is viewed as a strategy for redirecting natural waste materials from landfills, while making an item, at moderately ease, that is appropriate for agrarian purposes. Numerous investigations have been done on surveying the impact of Cow urine in fertilizing the soil of Municipal strong waste.

II. MATERIALS AND METHODS

Trials on consolidated fertilizing the soil were directed at a Plot No 29 Tukdoji Nagar Narsala Road Dighori Nagpur, Maharashtra, India, to examine the adequacy of metropolitan strong waste and dairy animals pee. The measure of age and structure of strong waste shifts all around inside the investigation. For the current investigation, test of civil strong waste was gathered from the Bhandewadi dumping yard, which was prior outside of NMC Nagpur Maharashtra. Assortment of dairy animals pee was done from Bramhapuri town, situated in the district Chandrapur, Maharashtra. Bovine pee test was in fluid structure and gathered in sealed shut plastic receptacles to wall it in from encompassing. 1.5 kg isolated vegetable waste, 1.5 old manure, 0.5 kg soils; 1.5 kg straw was blended in with 5%, 10%, and 15% of cow urine of 3 kg city strong waste for fertilizing the soil. The synthetic boundaries were resolved at Technical Inspection and Certification/ Scientific and Technical Laboratory Gupta House & Complex Civil Line, Nagpur, Maharashtra, India. To know the patterns which happen in the fertilizing the soil procedure a normal checking of key job boundaries, pH, temperature, dampness content, natural carbon nitrogen, phosphorous, smell, shading and so on was accomplished for 30 days' time span. Physicochemical investigation of completed manure will accomplish for pH, conductivity, all out nitrogen, natural carbon.

III. RESULTS AND DISCUSSION

The current investigation demonstrated that constrained portion of cow urine quickens the treating the soil procedure in blend with civil strong waste.

Table 1, 2, 3, 4, 5, 6 shows the physiochemical attributes of fertilizer got. During checking of fertilizing the soil first day without cow urine and with cow urine pH, temperature, dampness contain, natural carbon, nitrogen, phosphorus, shading, scent is separately nil, 33 and 30, nil, nil, nil, nil, yellow, nil.

Following 30 days without cow urine pH, temperature, and dampness contain, natural carbon, nitrogen, phosphorus,

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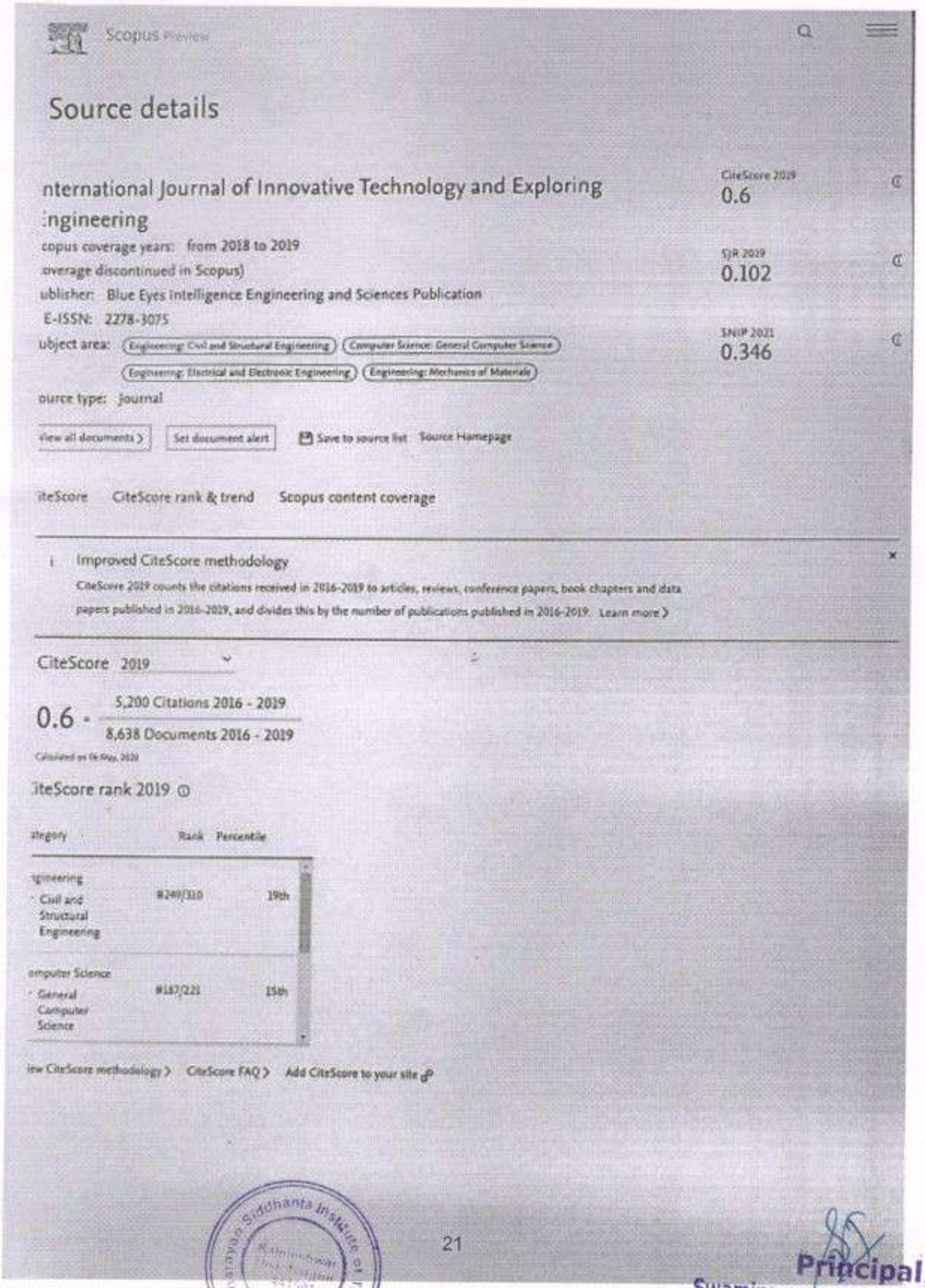

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DATA ANALYSIS WITH CLUSTERED BASED USING HADOOP

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Abstract:

Large collection of data sets includes different types such as structured, unstructured and semi- structured data. This data is categories as "Big Data" due to its absolute volume, variety and velocity. Traditional data management, warehousing and analysis system fall short of tools to analyze this data. Big data exceeds the processing capability of traditional database to capture, manage, and process the voluminous amount of data. Due to its specific nature of Big Data, in this paper we first introduce the big data is stored in distributed file system architectures. Hadoop and HDFS by Apache is widely used for storing and managing Big Data and the data processing is done by the Map Reduced system. To process or analyse this huge amount of data or extracting meaningful information is a challenging task.

Keywords- Big Data, HDFS, Map Reduced, Cluster.

I. INTRODUCTION

The amount of data in the world has been increasing exponentially. This data in petabytes of amount is called "big data". Big data is an evolving term that describes any voluminous amount of structured, semi-structured and unstructured data that has the potential to be mined for information. Although big data doesn't refer to any specific quantity, the term is often used when speaking about petabytes and exabytes of data. Analysis of such a large amount of data is a challenge for IT companies. So, the solution is to provide more manageable software. Big data also brings new opportunities and challenges in IT companies, Ecommerce and academia. There are many alternative recommendation services but effectively recommending services are need of time. These are the valuable tools to help users deal with services overload. Examples of such practical applications are existing customer records to predict trends, social media logs, CDs, EBooks, webpages, gadgets, video and music streaming or even food.

For example, large retailer might have huge amounts of data, tens of millions of customers and millions of distinct catalog items. Many applications require the results set to be returned in realtime, in no more than half a second, while still producing high-quality recommendations. New customers typically have extremely limited information, based on only a few purchasesor product ratings. Older customers can have a glut of information, based on thousands of purchases

Link to the journal academic year 2019-20

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2	Sensitization and corrosion of 409M ferritic stainless steel by different welding processes	M.S. Gurpude	Civil Department of eng	International Journal of Recent technology & engineering	2277-3878	https://www.ijrte.org/
3	Analysis & Recommendation of total dissolved solid of Chandrapur area	Arif Khan	Civil Department of eng	International journal of scientific research and reviews	2279-0543	https://jetir.org/?gclid=Cj0KCQjw9deiBhC1ARIsAHLjR2DNYjkdqKEFxVMPp16-_75uYB2mOOWvphcM7zC8XSRhgE4pavLYqUIaAlsfEALw_wcB

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Data Deduplication Techniques for Efficient Cloud

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1. Abstract: Duplicate detection is the process of identifying multiple representations of same real world entities. Today, duplicate detection methods need to process ever larger datasets in ever shorter time, maintaining the quality of a dataset becomes increasingly difficult.

The proposed System will compare Duplication Detection Method for best results. These methods are used for removing duplicate data and to reduce redundancy. The first is based on two Novel progressive duplicate detection algorithms that will significantly increase the efficiency of finding duplicates if the execution time is limited. These methods maximize the gain of the overall process within the time available by reporting most results much earlier than traditional approaches.

The second is based on Secure Hashing Algorithm which will detect, and delete duplicate data for performing data de-duplication task in order to overcome the issues of time and to reduce hash collision. In this work, write and delete operations will be performed for efficiency and time evaluation. This architecture will be useful for storage server where a huge amount of data is stored every day and software industries always looks for new developments so that they can keep their storage systems up to date and free for efficient utilization of it.

2. Introduction

In computing, data de-duplication has become a terribly necessary method of knowledge mining, it is a specialized method of information compression that eliminating duplicate copies of continuation data. Related and somewhat synonymous terms area unit intelligent (data) compression and single-instance (data) storage, large info storage, content delivery networks, blog sharing, news broadcasting and social networks as ascendant part of web services area unit information central. Hundreds of several users of those services generate peta bytes of latest information on a daily basis. Databases play necessary role in today's IT based mostly economy. Many industries and systems rely on the accuracy of databases to hold out operations. Therefore, the quality of the knowledge stored within the databases, can have important value implications to a system that

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LEARNING A DEEP MODEL FOR HUMAN ACTION RECOGNITION

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ABSTRACT: *Recognizing human actions from unknown and unseen (novel) views is a challenging problem. Video based human action recognition has many applications in human-computer interaction, surveillance, video indexing and retrieval. Human activity involves multiple people and to recognize such group activities and their interactions would require information more than the motion of individuals. To solve these challenges, we propose a novel system for predicting action from video that feed to system. Gaussian Mixture Model (GMM) is used for motion segmentation whereas features from segmented video is extracted using Histogram of oriented Gradient (HOG) technique. Classification for prediction of action is performed by using CNN.*

Keywords: Raspberry Pi, human activity recognition, Python, GMM, HOG, CNN

I. INTRODUCTION

Human activity analysis is one of the most important problems that have received considerable attention from the computer vision community in recent years. It has various applications, spanning from activity understanding for intelligent surveillance systems to improving human-computer interactions. Recent approaches have demonstrated great performance in recognizing individual actions. However, in reality, human activity can involve multiple people and to recognize such group activities and their interactions would require information more than the motion of individuals. This remains a challenging research topic largely due to the tremendous intra-class variation of human activities attributed to the visual appearance differences, subject motion variability, and viewpoint changes.

To solve these challenges, previous approaches in human activity recognition have focused on information about context. Context can be defined as information that is not directly related to the human activity itself, but it can be utilized to improve the traditional target-centered activity recognition. There is little work utilizing deep models and networks to capture the contexts for human activity recognition. Deep models have the potential to systematically incorporate multiple sources of contexts due to their multi-level deep structure, the capability of probabilistic reasoning, and the integration of hidden units to synthesize higher level representations of the raw input features.

Video based human action recognition has many applications in human-computer interaction, surveillance, video indexing and retrieval. Actions or movements generate varying patterns of spatio-temporal appearances in videos that can be used as feature descriptors for action recognition. Based on this observation, several visual representations have been proposed for discriminative human action recognition such as space-time pattern templates, shape matching, spatio-temporal interest points, and motion trajectories based representation. Especially, dense trajectory based methods have shown impressive results for action recognition by tracking densely sampled points through optical flow fields. While these methods are effective for action recognition from a common viewpoint, their performance degrades significantly under viewpoint changes. This is because the same action appears different and results in different trajectories when observed from different viewpoints.

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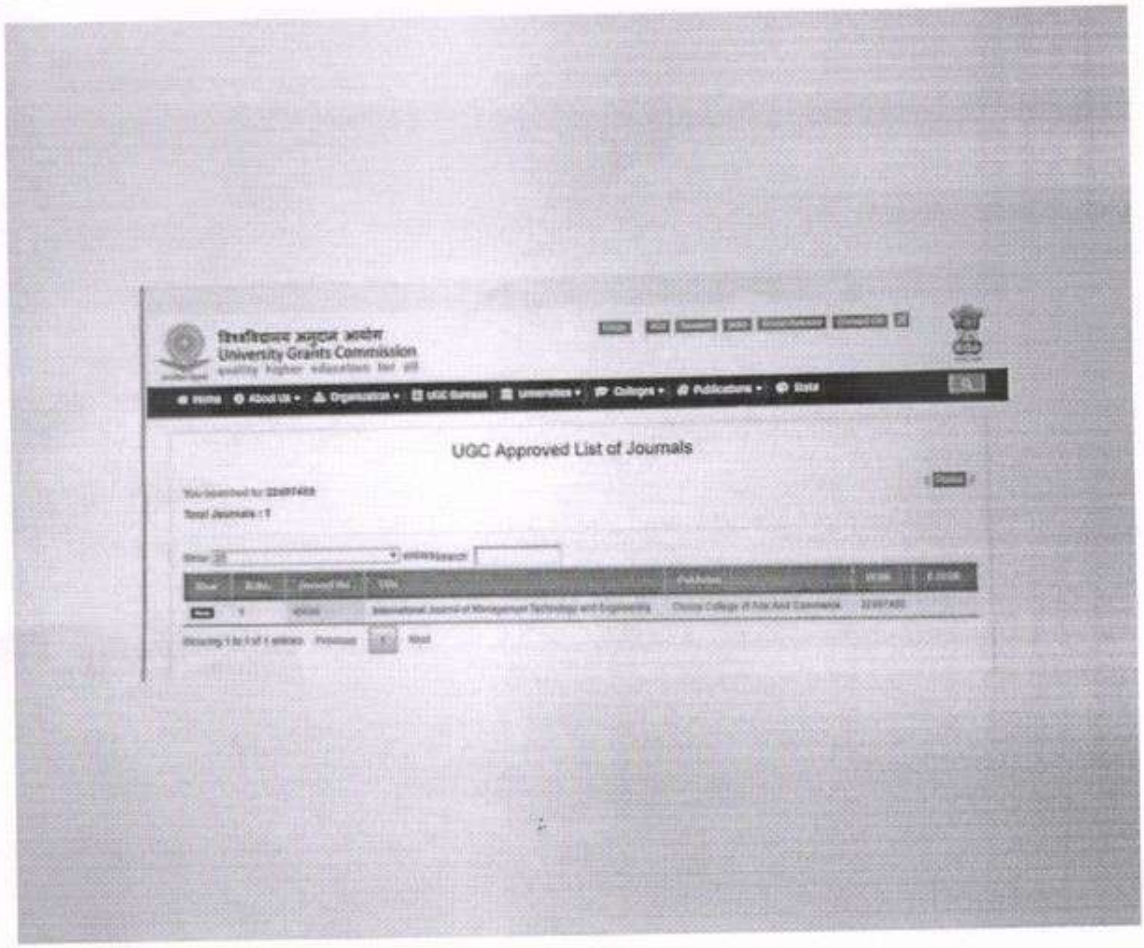

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Sensitization and Corrosion of 409M Ferritic Stainless Steel by Different Welding Processes

D. D. Balsaraf, P. P. Shirpurkar, V. M. Sonde, R. R. Gurpude, M. S. Giripunje

Abstract: *The aim of this research work was to analyze the sensitization due to the effect of welding (Shielded Metal Arc Welding, Gas Tungsten Arc Welding & Gas Metal Arc Welding) heat in heat affected zone area in terms of metallurgical properties, mechanical properties and corrosion of base metal comparatively. Also the effect of different chemicals / acidic environments on tensile properties was investigated. The plates of 3 mm thickness of 409M Ferritic Stainless Steel welded at constant current of 90A by three different welding processes with the same filler metal. The microstructure observation was made after Marble reagent chemical etched. Then tensile properties were investigated and comparative analysis done between the tensile properties i.e. before and after the chemical exposure given to it with the parent metal. After completion of experimental work it is found that SMAW, GMAW and GTAW have affected the microstructure of 409M Ferritic Stainless Steel. Due to the acidic environments/ Chemical exposures the strength and ductility of the metal affects. But comparatively GTAW has shown better process than GMAW and SMAW for welding of 409M Ferritic Stainless Steel. It should be used with caution in sulphuric acid environments than chloride environments to resist corrosion.*

Index Terms: *409M FSS, Sensitization, Corrosion, SMAW, GMAW and GTAW*

I. INTRODUCTION

Ferritic Stainless Steels (FSS) constitute approximately one-half of the AISI type 400 series stainless steels. These steels contain 10.5% to 30% of Cr along with other alloying elements, notably molybdenum [3]. These steels exhibit good ductility, formability, and moderately better yield strength relative to those of the austenitic grades, but the high temperature strength is somewhat poor. Due to the crystal structure, the toughness is low at cryogenic temperature [2]. These grades provide a saving of approximately 1.5 percent over the austenitic grades in material cost and are, as such, attractive alternative to the austenitic variety. [1].Ferritic stainless steel is a candidate material in less severe corrosion atmosphere for chemical processing equipment, furnace parts, heat exchangers, petroleum refining equipment, recuperators, storage vessels, electrical appliances, solar water heaters, and household appliances . They are particularly more appropriate in caustic and chloride environments [2]. The ferritic grade of stainless steel is not commonly used for structural engineering purpose because their fabrication is associated with several challenges principal among which is the deterioration in after-weld properties following conventional fusion welding process. However, in the recent past, the austenitic variety is becoming quite expensive on the account of the increasing cost of nickel; a major alloying element. Therefore, there is a renewed interest in the FSS though the challenges of acceptable weldability have yet to be fully addressed. Different welding techniques have been explored to improve weldability of the ferrites and it emerged that low heat input provides a promise [1]. However, despite these economic and metallurgical attributes, ferritic stainless steel is less used in engineering application. This is because fusion welding of ferritic stainless steel particularly the first generation group AISI 430 is associated with many problems. These problems are grain coarsening in both fusion zone and HAZ coupled with formation of grain boundary martensite in the weld, and these result in lower ductility and toughness in the weldment.

II. EXPERIMENTAL ANALYSIS

Experimental analysis consists of welding procedure for GTAW, SMAW and GMAW and preparation of samples for the microstructural test, Mechanical Properties test and corrosion test.

Welding Procedure

In order to analyze the sensitization gas tungsten arc welding, gas metal arc welding and shielded metal arc welding techniques were used for welding on 409M ferritic stainless steel plate. The sheet of size (3mm X 1200mm X 312 mm) were brought from the supplier is shown in the Fig.1&2 In this investigation, the sheet of 3mm thickness AISI 409M grade ferritic stainless steel were cut into the required plate of dimensions (72mm X 312mm) by hydraulic shearing machine. The six plates were cut for the three different welding techniques with the (72mm X 312mm) dimensions.

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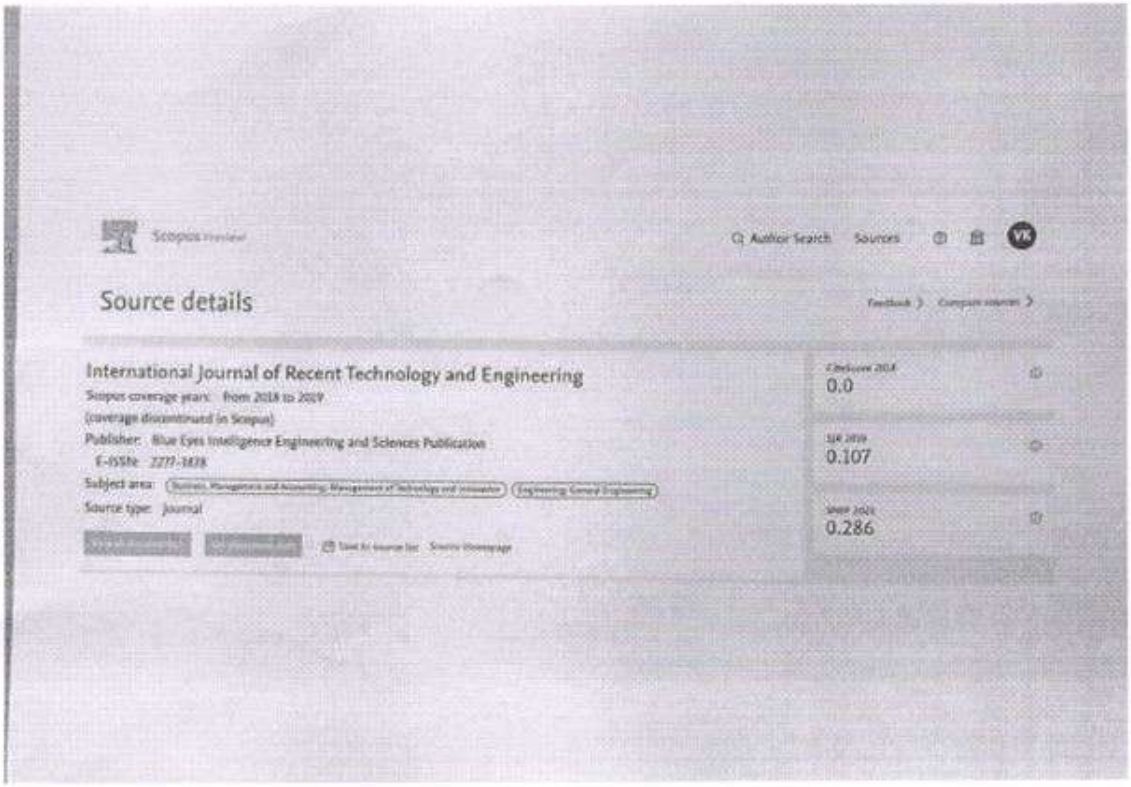

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Analysis and Recommendations of Total Dissolved Solid of Chandrapur Area

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ABSTRACT

The Chandrapur cities rapidly developing due to industrialization over the last two decades. It is considered as the fourth most polluted city in India. In view of the present study, understanding about the pollution status of water quality, especially in the vicinity of Chandrapur district, industrial area and mining projects. Environmental studies carried out on land and surface water to detect physical chemical parameters like TDS and dirt.At some stations the concentration of parameters beyond the boundaries can be reduced and in this area can be an invaluable source for domestic purposes. Current project status relate the water quality accounts of different sites located in Chandrapur and their capacity. Generally water is a good solvent and easy to blame. Pure water, tasteless, colourless, and odourless. Any solution of mineral, salts, metals, cations or anions dissolve in water. Total dissolved inorganic salts (main calcium, magnesium, potassium, sodium, bicarbonates, chloride and sulphates) and some small amount of organic matter that are dissolved in water. We generally have something to contribute to the definition of salinity ions TDS as a discussion on TDS only for freshwater systems. Study of quality of water for streams, rivers and lakes is the most important application of TDS, although TDS is the primary pollutant, but it does not indicate the presence of a broad array of chemical contaminated substances as an indicator of the aesthetics characteristics of drinking water.

KYEWORDS-TDS (Total Dissolve Solids),: Turbidity, Dissolved solids, Suspended solids, Hydroponic, Gravimetry, conductivity Keyword, Surface water, Ground water,, Physico-Chemical Parameters, APHA.

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Link to the Journal academic year 2018-19

S. No.	Title of paper	Name of Authors	Department of the Teacher	Name of Journal	ISSN Number	Link to Journal of the article
1	A Survey on CORDIC Algorithm & its implementation	Pooja Thakre	Department of Electronics & Telecommunication	International journal of Engineering research in computer science & engineering	2394-2320	https://www.technoarete.org/common_abstract/pdf/IJERCSE/v5/i6/Ext_48517.pdf
2	A CORDIC Architecture implementaion for Rectangular to polar Conversion	Pooja Thakre	Department of Electronics & Telecommunication	IJSRST	2395-6011	https://ijsrst.com/PDF.php?pid=4584&v=4&i=8&y=2018&m=May-June
3	Automatic meter Reading using wireless sensor module	Pooja Thakre	Department of Electronics & Telecommunication	IJSRST	2395-6011	https://ijirt.org/master/publishedpaper/IJIRT146660_PAPER.pdf
4	Analysis of total dissolved solid of chandrapur region	Arif Khan	Department of Civil engineering	Journal of Engineering Technologies and Innovative Research	2349-5162	http://www.ijsrr.org/
5	Analysis of Environmental Impact Assesment of mining projects & thermal Power plants of Chandrapur Region	Arif Khan	Department of Civil engineering	Journal of Engineering Technologies and Innovative Research	2349-5162	https://jetir.org/?gclid=Cj0KCQjw9deiBhC1ARIsAHLjR2DNYjkdqKEFxVMPp16-_75uYB2mOOWvphcM7zC8XSRhgE4pavLYqUIaAlsfEALw_wcB

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6	Fabrication of Thermoelectric Power Generation from Waste heat energy	Rahul Gurpude	Department of Mechanical engineering	IOSR Journal of engineering	2278-8719	https://www.iosrjournals.org/IOSR-JEN.html

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A Survey on CORDIC algorithm and its Implementation

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Abstract: COordinate Rotation DIgital Computer(CORDIC) is an uncomplicated and efficient algorithm for performing mathematical tasks such as the calculation of trigonometric, hyperbolic and logarithmic functions, real and complex multiplications, division, square-root and many more using simple add, subtract and shift operations. Rectangular to polar conversion is an imperative operation in ALU, DSP processors, wireless communication, multimedia etc.To achieve this conversion there is a need of squaring, square root and arctangent circuits, which make it complex with high area and power requirement. To compensate this, rectangular to polar conversion is carried out using CORDIC architecture. This paper presents a survey on pipelined CORDIC architecture for rectangular to polar conversion.

Keywords: CORDIC algorithm, pipelining, VHDL, XILINX ISE.

1. INTRODUCTION

CORDIC is acronym for COordinate Rotation DIgital Computer. Two dimensional geometry forms the basis of CORDIC arithmetic but the iterative method of a computational algorithm to implement this was first given by Jack E. Volder to compute multiplication, division and trigonometric functions in 1959[1], [2].

The key concept of coordinate rotation digital computer (CORDIC) algorithm revolves around a simple shift-add iterative procedure. This shift-add iterative achieves computing tasks by functioning in either vectoring-mode or rotation-mode following any one among linear, hyperbolic and circular trajectories [3]. CORDIC functionality is workable in rotation as well as vectoring-modes for applications such as synchronization in digital receivers, 3-D graphics processor, phase and frequency estimations, eigen value estimations, QR decomposition, interpolators, singular value decomposition etc. CORDIC operates in both circular and hyperbolic trajectories for 3-D structures such as hyperboloids, paraboloids and ellipsoids. To realise these application in hardware there is a need to use multiple CORDIC processors for operation in different modes and trajectories. Multiple CORDIC processors are replaced by a reconfigurable CORDIC, which can operate in rotation and vectoring-modes, for both circular and hyperbolic trajectories. A reconfigurable CORDIC finds usage in communication systems, signal processing, 3-D graphics, multimedia etc.

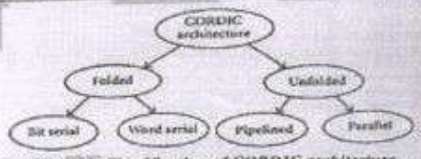

Figure 1: Classification of CORDIC architecture

Figure1 above gives us an idea of classification of CORDIC architectures., This classification is based on three iterative equations . Folded architectures is realised by duplicating each of the difference equations of the CORDIC algorithm into hardware and time multiplexing all the iterations into a single functional unit. Folding gives an option of trading area for time in signal processing architectures. The folded architectures are further subdivided into bit-serial and word-serial architectures on the basis of functional unit implemented. The CORDIC algorithm conventionally has been implemented using bit serial architecture with all iterations executed within same hardware [3] and this slows down the computational device rendering it unsuitable for high speed implementations. The word serial architecture [7, 48] is an iterative CORDIC architecture obtained by realizing the iteration equations and employs the modified shifters in each iteration to cause the desired shift for the iteration. The lookup table provides the appropriate elementary angles. The major burden is enforced by borrow propagat addition/

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A CORDIC Architecture Implementation for Rectangular to Polar Conversion

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ABSTRACT

Co-ordinate Rotation DIgital Computer(CORDIC) is a simple and efficient algorithm for performing computing tasks such as the calculation of trigonometric, hyperbolic and logarithmic functions, real and complex multiplications, division, square-root and many more using simple add, subtract and shift operations. Rectangular to polar conversion is an important operation in ALU, DSP processors, wireless communication, multimedia etc. This conversion requires hardware implementation of squaring, square root and arctangent circuits, which results in hardware complexity, large area requirement and high power consumption. To overcome this drawback, rectangular to polar conversion is carried out using CORDIC architecture. This paper proposes pipelined CORDIC architecture for rectangular to polar conversion using much simpler, cheaper and efficient hardware. Pipelining increases throughput of the system. The implementation has been done in VHDL language and simulation can be done on XILINX ISE software.

Keywords : CORDIC algorithm, pipelining, VHDL, XILINX ISE

I. INTRODUCTION

Co-ordinate Rotation DIgital Computer is shortened as CORDIC. The simple principles of two-dimensional geometry are the basis of CORDIC arithmetic but the iterative method of a computational algorithm to implement this was first given by Jack E. Volder to compute multiplication, division and trigonometric functions in 1959[1], [2].

The key concept of coordinate rotation digital computer (CORDIC) algorithm is that it involves a simple shift-add iterative procedure. This shift-add iterative procedure perform several computing tasks by operating in either vectoring-mode or rotation-mode following any one among linear, hyperbolic, and circular trajectories [3]. CORDIC operates in both rotation and vectoring-modes for applications such as synchronization in digital receivers, 3-D graphics processor, phase and frequency estimations, eigen value estimations, QR decomposition, interpolators, singular value decomposition etc. CORDIC operates in both circular and hyperbolic trajectories for 3-D structures such as hyperboloids, paraboloids and ellipsoids. The hardware implementation of these applications requires more than one CORDIC processor to operate in different modes and different trajectories. Multiple CORDIC processors are replaced by a reconfigurable CORDIC, which can operate in rotation and vectoring-modes, for both circular and hyperbolic trajectories. For range of applications in communication systems, signal processing, 3-D graphics, multimedia etc. a reconfigurable CORDIC can be used.

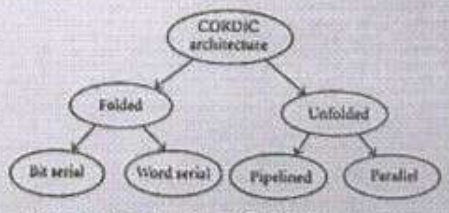

Figure 1: Classification of CORDIC architecture

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Automatic Meter Reading using Wireless Sensor Module

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Abstract- In the recent time huge advances have been made in the way the consumers are charged for the energy they consume. Things are moving out quite fast and areas where there was human intervention are being fast replaced by machines .The concept of e-metering (Electronic Metering) has been progressing at a very fast pace and with the ever increasing customer base the energy transmission companies are in need of a reliable and efficient Automatic Meter Reading (AMR) system. This paper presents a simple inexpensive GSM based Automatic Energy Meter Reading system (AEMR). The proposed system provides a remote access method for the consumer as well as the energy provider .It gives an opportunity to both the consumer as well as the supplier to remotely monitor the energy meters and thus helps in obtaining the energy reading in a hassle free manner .The Automatic Energy Meter Reading system (AEMR) regularly read the energy meter and calculate total amount of bill at the set dead line and sends the message to service provider. From energy meter received data i.e. user name, meter ID, total units with paying amount this message maintained at database server which located at service provider department. This system optimizes the time used in billing and provides a transparent interface to the consumer and the supplier to have an idea about energy consumed and the bill generated AEMR System can provide message at hourly, daily and monthly by the request, reduces the manpower required and prevent pilferage, improves the system efficiency thus turning out to be more efficient that conventional billing system.

Index Terms- AEMR, Electronic Metering, TTL, WAMRS, GSM, ZIGBEE, GPRS, MAX-232, ARM7.

I. INTRODUCTION

Now a day energy meter reader goes to every premise and takes the reading manually then issues the bill. In manually reading human error possible and not provide reliable meter reading. An energy meter is a device which is used to measures the consumption of energy of any residence or other industrial establishment. In Conventional metering system to measure electricity consumption the energy provider company hire persons who visit each house and record the meter reading manually. This is only a sluggish and laborious. In Conventionally metering system people try to manipulate meter reading by adopting various corrupt practices such as current reversal or partial earth fault condition, bypass meter, magnetic interference etc. If any consumer did not pay the bill, the electricity worker needs to go to their houses to disconnect the power supply.[1]The wide proliferation of wireless communication propose and explore new possibilities for the next generation Automatic Meter Reading (AMR) whose goal is to help collect the meter measurement automatically and possibly send commands to the meters. Automation ranges from Connecting to a meter through an RS-232 interface for transmitting the meter measurements all the way from the meter to the utility company via GSM network. [2] We are use the digital energy meter in implies a times-sampled system. An analog to digital converter sampled current and voltage transducers output at a high frequency, translating real world waveforms to binary words that digital circuitry can understand and manipulate. Digital energy meters maintain their accuracy over a larger current range than the mechanical meter. These new meters are also stable over change in temperature, voltage and line frequency.

Whenever it is intended to develop a new technology the focus is to ensure that key issues are addressed properly and it is also necessary that the advanced features proposed address the problems of the previous technology and gets improved .Similarly there is need to upgrade the existing system and allow its use for everybody. The key is to develop a product that can serve as a replacement for the metering and billing system currently in use. This emphasis that the meter under development has to work under the old circumstances and perform all the

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ANALYSIS OF TOTAL DISSOLVED SOLID OF CHANDRAPUR REGION

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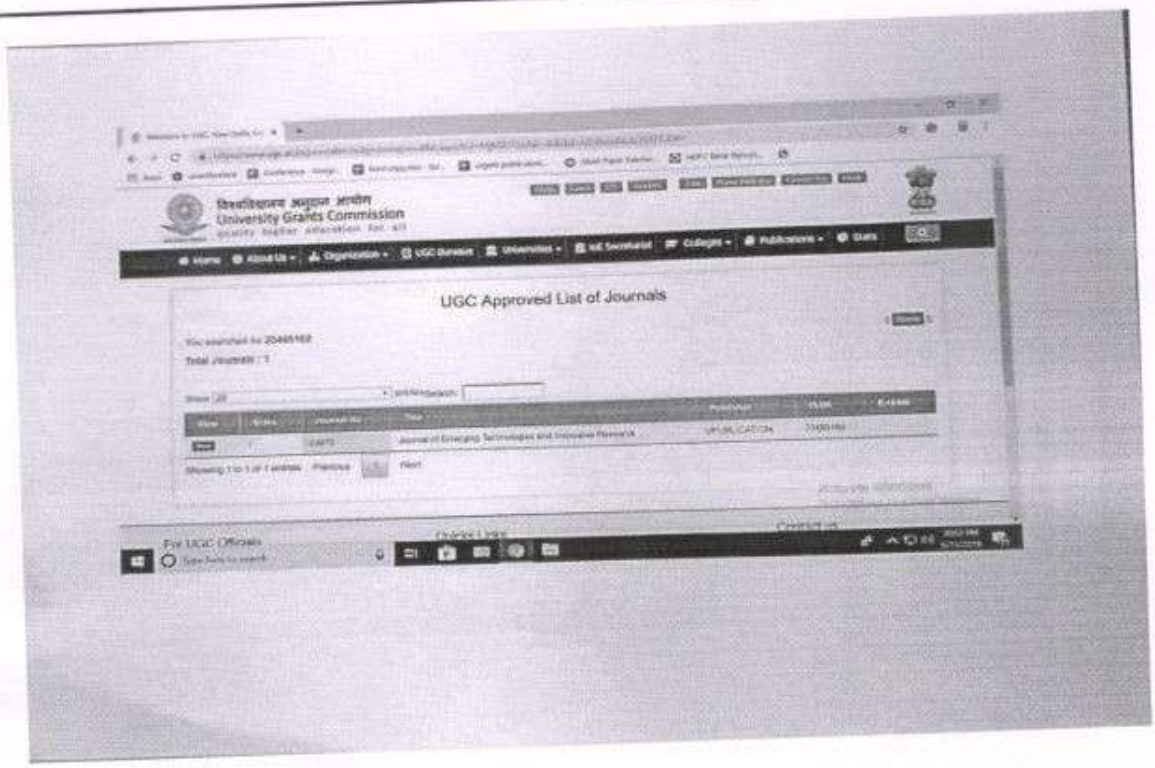
Abstract: - Chandrapur city is developing rapidly due to industrialization since last two decades. It is considered as fourth most polluted city in India. The present study was carried out with a view to have an understanding about the pollution status of Chandrapur district, particularly water quality in vicinity of Industrial area and mining projects. Environmental studies were carried out on ground and surface water to find out the physico-chemical parameter like TDS and turbidity. It is necessary to collected sample from different sites, in order to evaluate the drinking water quality in and around Chandrapur district. The analysis of various parameters using standard methods (APHA/NEERI) and their comparison with WHO (World health organization) standards values, suggest that most of the parameter within permissible limit given by Central pollution control board of India (CPCB). Concentration of parameters beyond the limits in some stations could be reduced and could be an invaluable source for domestic purposes in the region. The present paper accounts water quality of various sites situated in Chandrapur and their efficiencies respectively.
Generally Water is a good solvent and pick up impurities easily. Pure water is tasteless, colorless, and odorless. "Dissolved solids" refer to any minerals, salts, metals, cations or anions dissolved in water. Total dissolved comprises inorganic salts (principally calcium, magnesium, potassium, sodium, bicarbonates, chlorides and sulphates) and some small amount of organic matter that are dissolved in water. We generally discuss TDS for freshwater system only, as salinity consists of some of the ions contributing in the definition of TDS. The Study of water quality for streams, rivers and lakes is the most important application of TDS, although TDS is not primary pollutant, but TDS used as an indicator of aesthetics characteristics of drinking water and as indicator of the presence of broad array of chemical contaminant.

***KYEWORDS*-TDS (Total Dissolve Solids), Turbidity, Dissolved solids, Suspended solids, Hydroponic, Gravimetry, conductivity Keyword, Surface water, Ground water,, Physico-Chemical Parameters, APHA.**

I. INTRODUCTION

Drinking water pollution is the global concern of present era. The growth of industrial area is so rapid and very fast thus related to anthropogenic activities have been increased like waste discharge from industries, transportation and domestic activities. The domestic waste generated is directly enters into the different sites of water bodies without any treatment and also the continuous flow from agricultural waste water contaminates the water source of surrounding area. This entire problem affects the water resources and ultimately human health. Water is one of the three major components of our environment; therefore, there exists a close linkage between the quality of water and the environment which bears an almost importance for eco-system. Natural bodies of water are not absolutely pure as various organic compound and inorganic elements presents in dissolved form. Many kinds of macroscopic flora and fauna grow in different types of aquatic habitats. The physico-chemical quality of water vary according to the basin shapes and sizes, depth, light penetrations, precipitation, locations, temperatures, chemical nature of surrounding soil and dissolved minerals , pH, etc, and the biological component of the habitat depends upon them If all the physical, chemical and biological parameter are in optimum conditions. Most of the people depend on fresh water supplies from groundwater. It provides water for domestics use for sources of water for irrigation and various small scale industries. The availability of groundwater depend on the rate at which it is recycle by hydrological cycle.

Chandrapur district is located in the east side edge of Maharashtra in Nagpur division and form the eastern part of "Vidarbha" region. It is located between 19.3 degree to 20.45 degree latitude and 18.4 E longitudes. District occupies an area of 11444 sq km, which constitutes 3.72 percent of the total area of the state and has population as per 2011 was 3,20,400 and it will be reach about 3,47,485 in 2019. The Chandrapur town is situated at 189.90 meter above form the mean sea level. Area of the city is about 70.02 km². The climate of Chandrapur is mostly tropical Chandrapur district is well known for the Coal Mines, Super Thermal Power Station and many Cement industries, Ferro alloys and paper industries. Wardha, Wainganga and Penganga are important rivers surrounded by Chandrapur district. The Wardha River flows into the district from western boundary and then flow along the boundarie of Warora, Chandrapur, Korapna,Rajura, Ballarpur and Gondpipri Talukas. Penganga and Irai rivers meet the Wardha River. The drinking water supply projects in Chandrapur district includes about 200 pipeline schemes, 170 tube wells, 4070 wells and 4515 Bore well/ Hand pumps in the entire district. Besides, the Municipal councils in Chandrapur district is regularly supplying drinking water to local public from Irai river dam. About 84% of the state is covered by Deccan basalts whereas the rest of the state is covered by Quaternary alluvium. The total replenish able groundwater resource is of the order of 37.80 BCM/Yr. Provision for domestic, industrial & other uses for Chandrapur district are about 12.40 BCM/Yr and for irrigation purposes is about 25.47 BCM/Yr. Ground water levels declining trend (more than 20 cm per year) in before Monsoon season in vicinity of Chandrapur district. Study area. The studies carried out for three months during the end of winter season to summer season. The main aim of the study was to investigate the physico-chemicals characteristics of water samples in Chandrapur district, because most of these samples are located in the vicinity of the city.
Industrial sewage and agricultural run-off around Chandrapur cover load groundwater with chemical wastes and nutrients and make the water-supply toxic. Effective management of water resources and control of pollution are become increasingly important for sustainable developments and humans welfare. The industrial activity discharges water containing various hazardous chemicals on open ground which pollutes the vicinity groundwater. Water is a prime natural resources and a basic



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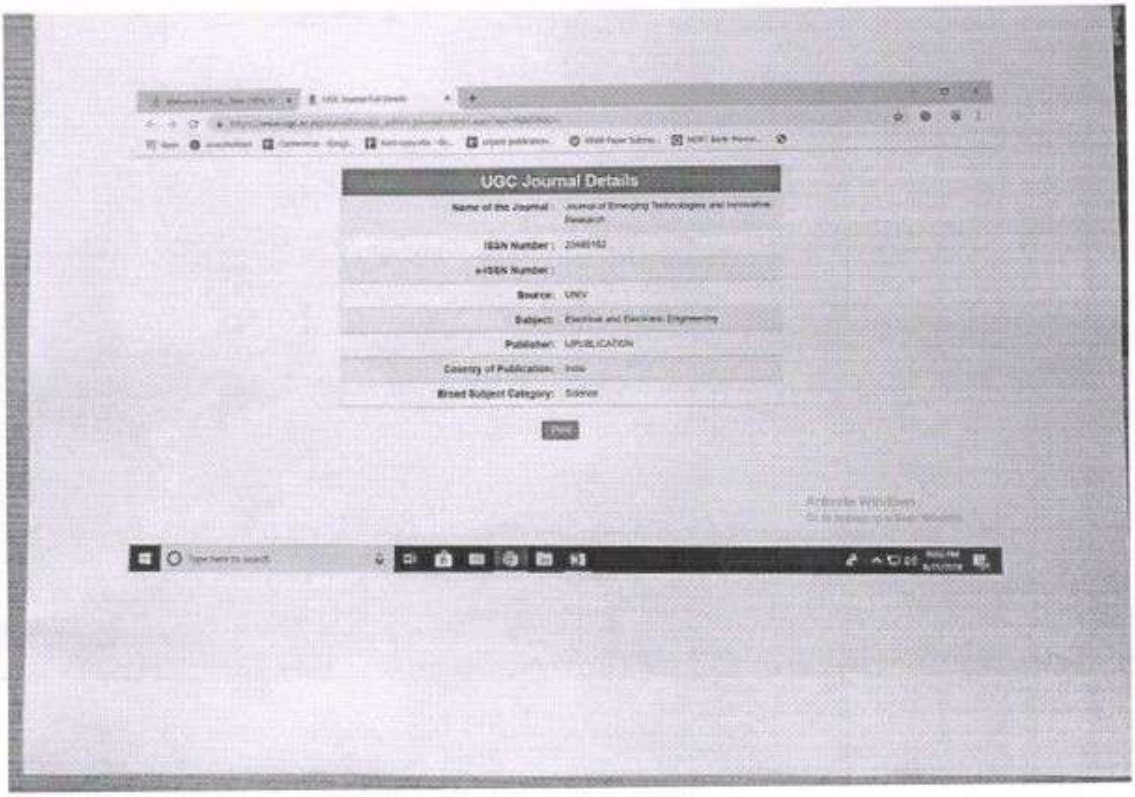

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ANALYSIS OF ENVIROMENTAL IMPACT ASSESSMENT OF MINING PROJECTS AND THERMAL POWER PLANTS OF CHANDRAPUR REGION

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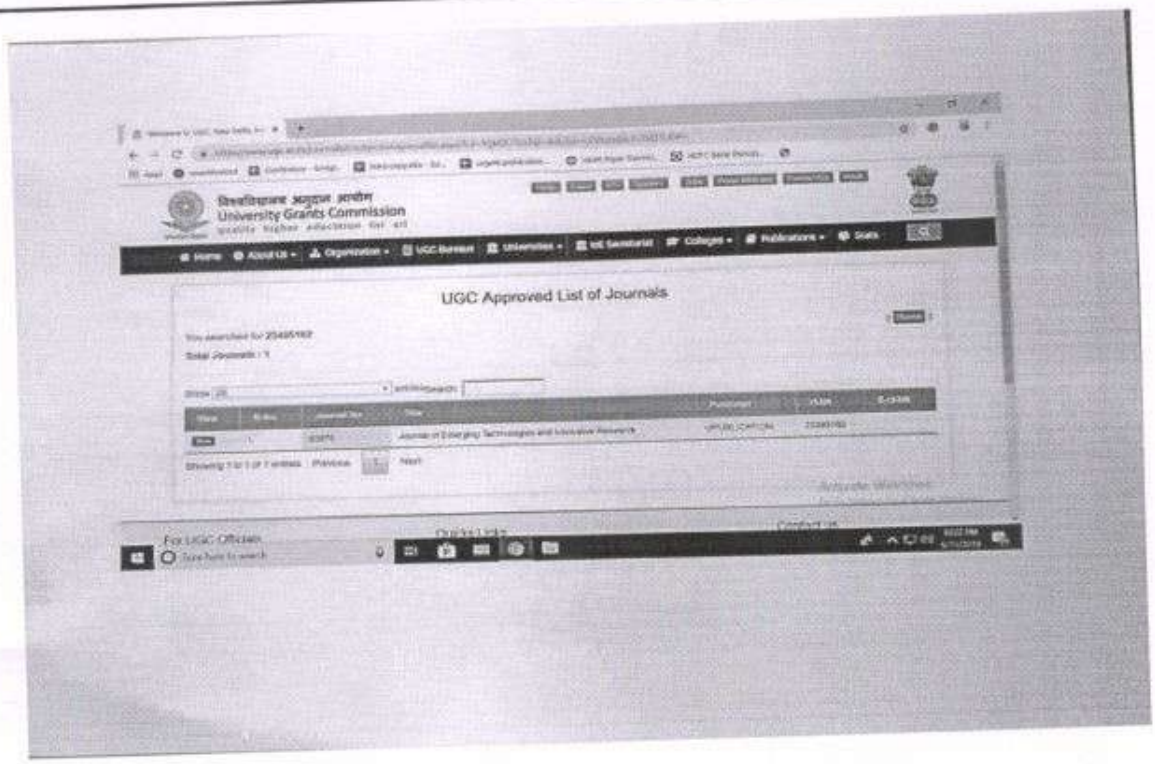
Abstract: - Environmental protection is an important issue in all Industrial, hydroelectric, mining, power plants project. Industrial activity and their procedure influence the environment and metrological changes. Industrial activity are pursued in India without focussing on environmental issue, due to natural resources are in pressure and also creating adverse effect on human health , this environment changes because of unplanned and unsuitable development. Hence India's governments introduced Environmental impact assessment (EIA) in 1994 under environmental protection act of 1986 to plan activity in sustainable and effective way. During this period of 25 year since 1994 numerous impact assessment have been conducted. Environmental impact assessment (EIA) involves identifying, measure and assesses the impact. This complicate process deals with considerable amount of information and require processing and analysis of quantitative data, qualitative information as well as expert judgement.

Under this various process of Environmental impact assesament(EIA), methodology, principles, various impact considered in Environmental impact assessment, structure of Environmental impact assessment document will be taken under study and all this study will be compare with actual field study of mining project and chandrapur super thermal power plants. The aim of study is to examine all aspects and activity of selected project in terms of its impact on the environmental component and to know the strength of environmental pollution control measure adopted. In order to identify environmental impact of selected place several interviews with the relevant authorities will conduct and present status of environment in chandrapur area will know. In addition to its public opinion survey of project affected people will conduct and conclusion from field survey will draw This study has been undertaken to investigate the determinants of stock returns in Karachi Stock Exchange (KSE) using two assets pricing models the classical Capital Asset Pricing Model and Arbitrage Pricing Theory model. To test the CAPM market return is used and macroeconomic variables are used to test the APT. The macroeconomic variables include inflation, oil prices, interest rate and exchange rate. For the very purpose monthly time series data has been arranged from April 2017 to Jan 2019.

***KYEWORDS*- EIA, Air Pollution, Water Pollution, Noise Pollution, Land**

I. INTRODUCTION

Environmental impact assessment (EIA) involves identity, measure and assessing impacts. This process deals with sufficient amount of information and requires process and analysis of data, qualitative information as well as expert judgment on it. Central Pollution Control Board (CPCB) has identified around many major industrial clusters in the country as "critically polluted". To examine the impacts of the industrial projects on Chandrapur, we conducted a case study on the EIA of mining projects. Various Mining Underground Project is located in Chandrapur district of Maharashtra State and administered by Chandrapur Area of Western Coalfields Limited. Chandrapur city and its surrounding area were declared 4th in the list of critically polluted areas. Western coal field Ltd has 30 coal mines. Based on the coal reserve on super thermal power stations, 6 captive power projects, 4 cement factories, 2 steel plants, 6 sponge iron plants and near about 200 small companies in Maharashtra industries development corporation areas. Four major industries clusters are polluted like Ghugush, Tadali, Ballarpur, Gadchiroli, Durgapur, Bhadrawati and warora. Villages are mainly affected from air pollution, groundwater has depleted, agriculture lands are affected, gradual rise in temperature especially in summer (up to 52 degree Celsius), and health is at risk. There are no national parks, wildlife Sanctuary, Biosphere Reserve found in 15 km buffer zone. The project does not involve modification of drainage. Mining will be underground by Board &Pillar method involving hydraulic sand stowing. The extension project does not involve change in land requirement, mining technology, displacement, Manpower, and no fresh source of the water. Mineral transportation of coal is by trolley from mine face to surface to CHP located near the Incline mouth and thereafter by road and by rail the railway siding located at a distance of 2 km. Ultimate working depth of the mine is 275m below ground level .Mining has intersected water table, which is in the range of 3 to 14 m.



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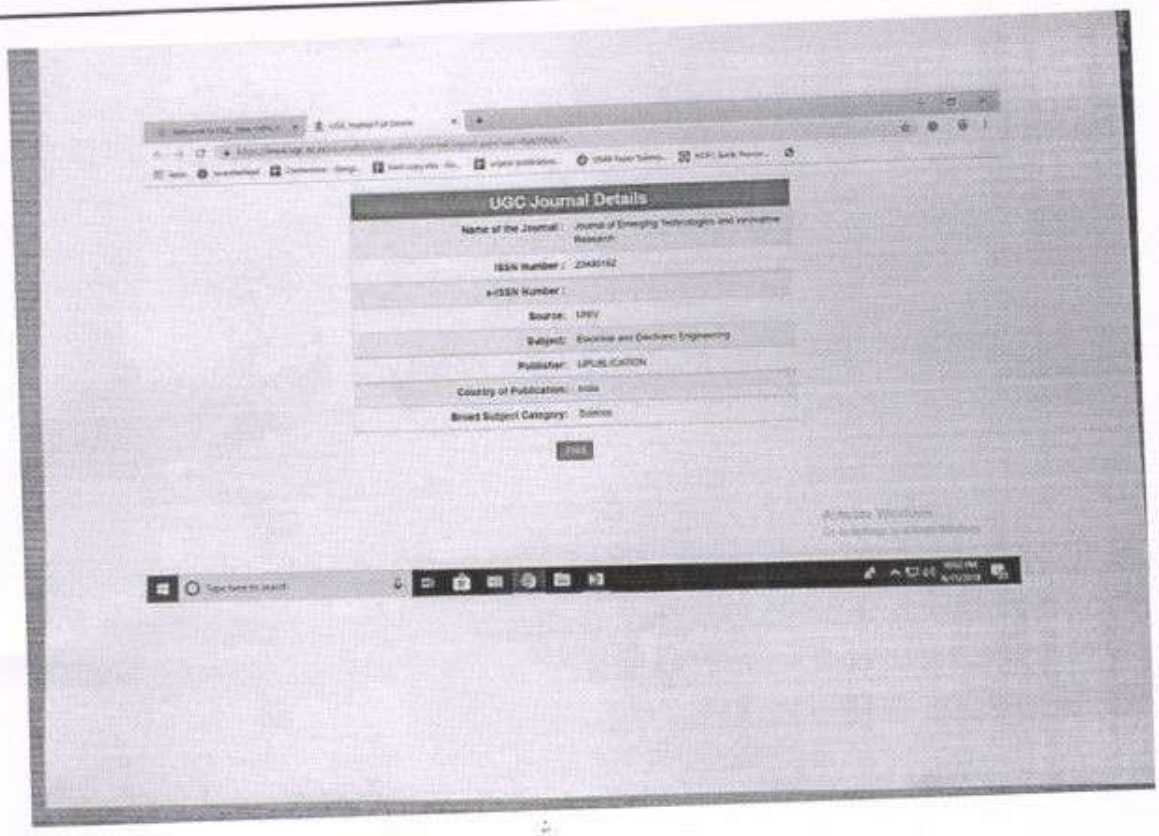

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Fabrication of Thermoelectric Power Generation from Waste Heat Energy

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Abstract
The need of energy is increasing rapidly, but only few sources are available to produce energy. To produce the energy efficiently from waste heat the thermocouple is used. Here the power generation is simple, as there is a need of temperature difference to produce power. The waste heat energy is being generated from ocean thermals, steam and various forms of waste heat. The trapping of these waste heat energy is converted into electrical energy with the help of thermocouple, which works on the principle of Seebeck effect. The Seebeck effect is a phenomenon in which temperature difference between two dissimilar metal junctions produces a voltage difference. Also boost converter circuit is used to boost up the magnitude of voltage being generated by the module to charge the battery.

I. Introduction

Recently we are depending upon fossil fuels for maximum electricity generation. However, the reserves of fossil fuels will be goes on depleting, since oil & gas are the least sources. Recent years cost of unit electricity has increasing to unpredictable levels due the less supply of oil, gas and coal. Thus the green energies are more attractive artificial to electricity generation, as it will also provide a pollution free and cost less. In this innovative project, we are using one device which is used to be created and introduced by human as a renewable energy that is thermo electric generator equipment to generate electricity. As we know Renewable energies are, solar energy, wind energy, hydro energy, tidal energy, etc. above energies can produce electricity in different forms and way of generating method. There are some disadvantages. Solar cells are the most commonly used in applications such as household industrial.

and spacecraft electrical systems. However, if there is no sun light there will no production of electricity alternative sources are necessary for generating electricity or a method of storing energy for future use. Wind and hydro electric energy have their own drawback making them less power production and insufficient for wider usage. The device by converting heat energy to electrical energy. This thermoelectric generator is suitable power for space research, Satellites and even unmanned facilities. Satellites are settled at the planets that so far from the earth. For example, thermoelectric devices can be used in vehicles to producing electricity using the waste heat of the engine also.

TEG (Thermoelectric generator) is used to convert thermal energy (heat) in to electricity based on "Seebeck effect" directly. Here there is charge movement in the media. Advantages of Thermoelectric power generators are. - Small size and less weight. . - Green Technology. - increase the overall efficiency (5% to 8%). - Alternative power sources of energy. - It require less space and cost compare to other source waste heat to generate the power is to decrease the cost-per-unit of the devices. TEG can be used in , Jet Engine parts, IC Engines parts, Furnace cover, Hot water tubes, Refrigerator Computer/laptop Body heat etc.

PRINCIPLE USED

The basic theory and operation of thermoelectric based systems have been developed for many years. Thermoelectric power generation is based on a phenomenon called "Seebeck effect".

➢ **SEEBECK EFFECT:-**

When a temperature difference is established between the hot and cold junctions of two dissimilar materials (metals or semiconductors) a voltage is generated, i.e., Seebeck voltage. In fact, this phenomenon is applied to thermocouples that are extensively used for temperature measurements. Based on this Seebeck effect, thermoelectric devices can act as electrical power generators. A schematic diagram of a simple thermoelectric

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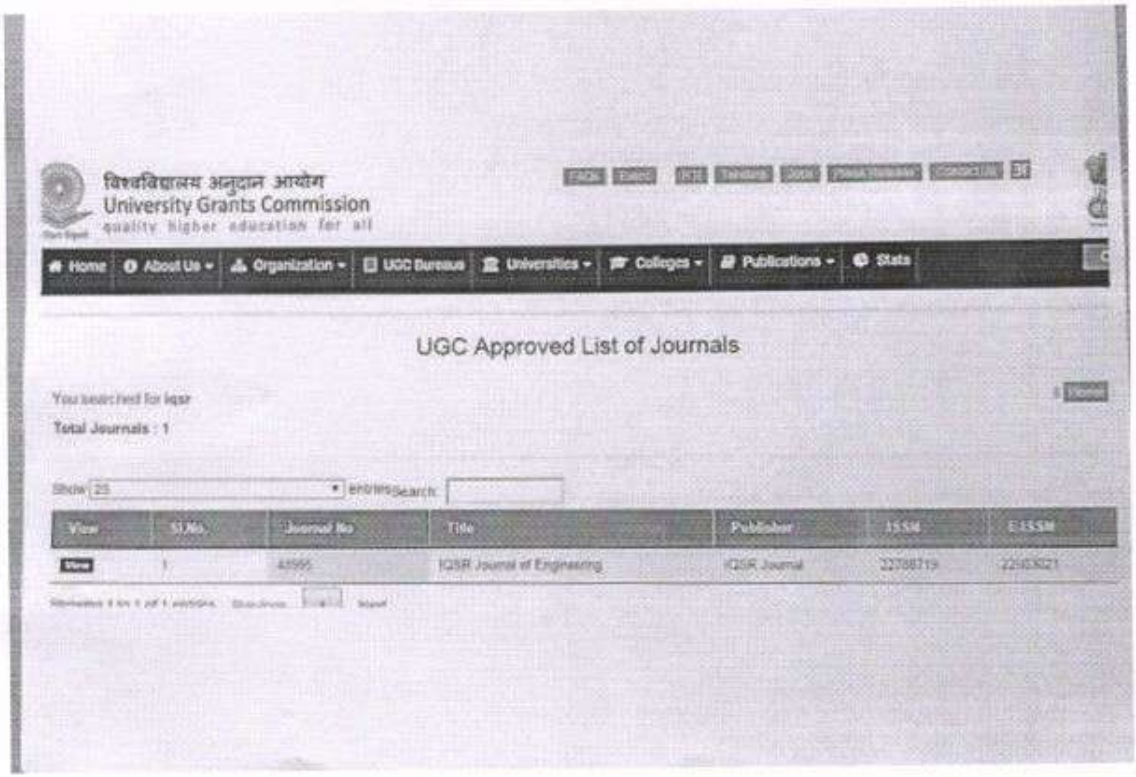

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S. No.	Title of paper	Name of Authors	Department of the Teacher	Name of Journal	ISSN Number	Link to journal of the article
1	Use of Fuzzy set Theory in environmental Engineering Application	Arif Khan	Department of Environmental Engineering	International journal of Engineering reserch& application	2248-9622	http://www.ijera.com/papers/Vol7_issue6/Part-2/A0706020106.pdf
2	A Fuzzy Logic Approach to asses Biological Quality	Arif Khan	Department of Environmental Engineering	International journal of Civil, Structural ,Environmental Reserch& development	2349-7978	http://www.tjprc.org/publishpapers/2-11-1500361385-3.IJCSEIERDAUG20173.pdf
3	A Fuzzy Approach to find land use index	Arif Khan	Department of Environmental Engineering	International journal of innovative research in science	2347-6710	http://www.ijirset.com/upload/2017/july/65_9_FLUI_Rev.pdf
4	Privacy & Protection of mobile health data on secure cloud storage	Naziya Pathan	Department of Computer Science & engineering	International journal for scientific reserch& development	2321-0613	https://www.ijsrd.com/
5	Evaluation of canny & Sobel edge detection	Pooja Thakre	Depatment of electronic	International journal of	2395-6011	https://ijsrst.com/NC

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Proof of Publications Academic Year 2017-18

Arif Khan, Int. Journal of Engineering Research and Application www.ijera.com
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RESEARCH ARTICLE OPEN ACCESS

Use of Fuzzy Set Theory in Environmental Engineering Applications: A Review

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ABSTRACT
Methods of solving the identified environmental problems, considering mathematical rigorous alternative assessment of environmental component process using fuzzy logic and approximate reasoning, are described by various researchers. To illustrate how such a computational intelligence approach would work in performing an assessment, various artificial techniques have been described. Fuzzy system technique for analysis of environmental components differentiates the approach from those techniques used in the past. It takes advantage of advanced computational intelligence techniques such as fuzzy sets and logic, for quantifying and manipulating in a mathematically rigorous way, subjective, inherently uncertain or imprecise values and concepts. This paper put forth the use of fuzzy sets in field of environmental engineering.

Keywords: Fuzzy set theory, environmental components, Artificial intelligence, and environmental variables

I. Introduction

The need for more appropriated techniques to manage the importance of environmental variables, the interpretation of an acceptable range for each parameter, and the method used to integrate dissimilar parameters involved in the evaluation process is clearly recognized. In this sense, some alternative methodologies have emerged from artificial intelligence. These methodologies, mainly fuzzy logic and fuzzy sets, are being tested with real environmental problems. The final aim is to reduce the uncertainty and imprecision in criteria employed in decision-making tools. [6, 10, 23]

It is proposed by many researchers to use the methods based on fuzzy sets theory to handle the uncertainty involved in analysis of Water, Air, Land, Biological and socio-economic concepts. Keeping the importance of uncertainty handling in the environmental quality assessment and versatility of the fuzzy set theory in the decision making in the imprecise environment', continuous attempts are being made to describe the environmental quality by considering the fuzzy set theory.

II. Fuzzy Set Theory in Environmental Engineering Applications

Bhupinder Singh et al (2008) applied fuzzy rule based optimization model for twenty groundwater samples from Sohna town of Gurgaon district of Southern Haryana, India. These samples were analysed for 15 different physico-chemical parameters, out of them nine important parameters were used for the quality assessment using fuzzy synthetic evaluation approach. They concluded that all the water samples are in acceptable category whose certainty level ranges from 44 to 100%. Water from these sources can be used for the drinking purposes if alternate water source is not available without any health concern on the basis of physico-chemical characteristics.

Aurelio Azevedo Barreto- Neto and Carlos Roberto de Souza filho (2008) suggested the Fuzzy Soil Conservation Service Curve Number (SCSCN) model used as a tool for predicting runoff and, consequently, soil erosion and quality of water in watersheds. The program developed here can produce fuzzy boundaries with different widths and can be used with numerous membership functions by simple changes in program script

Yilmaz Icaga (2007) used Fuzzy logic with an index model for quality evaluation of surface water quality classification using fuzzy logic. In the method, traditional quality classes are transformed into continuous form and then the concentration values of the different quality parameters (pH, DO, Cl, SO_4, NH_3, NO_2, NO_3, TDS, Color, Na) are summed using fuzzy rules, finally, defuzzyfication of this summed values develops the index. He concluded that more accurate information may be obtained using continuous from which is obtained by Fuzzy logic.

Based on the Fuzziness and imprecision of water system, the LI Ru-zhong (2007) used the fuzzy arithmetic to simulate the fuzzy and imprecise relations in river quality modeling. By defining the parameters of water quality model as symmetrical triangular fuzzy numbers, a two-dimensional fuzzy water quality model for sudden pollutant discharge is established. From the fuzzy model, the pollutant

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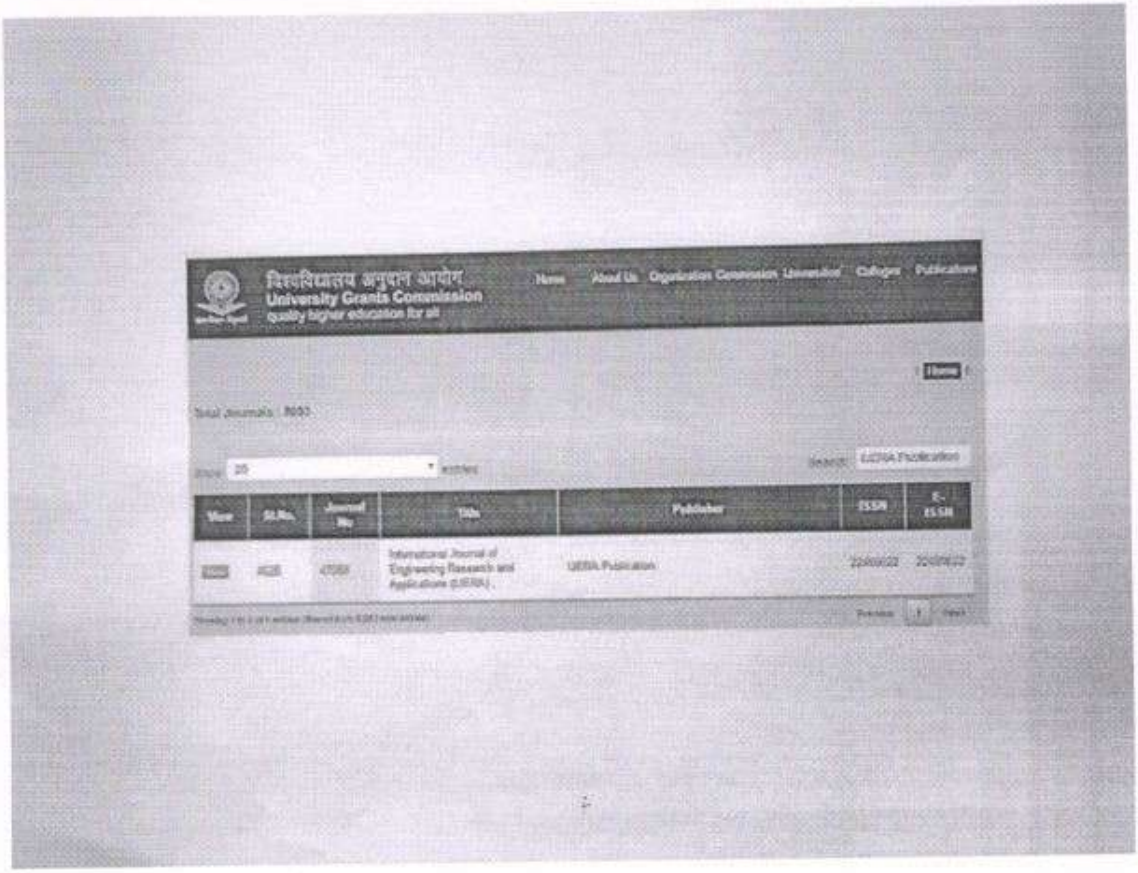

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FUZZY LOGIC APPROACH TO ASSESS BIOLOGICAL QUALITY

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ABSTRACT

Biodiversity indices developed have been used to find plant biodiversity index, bird biodiversity index and aquatic biodiversity index, independently. However, a single index is not available to represent biological environment in a nutshell, which can represent aquatic biodiversity, plant biodiversity and bird biodiversity index. Moreover, in development of these indices, Crisp Set Theory has been used, which deals with standing boundary conditions. In present paper, an attempt has been made to develop single index, which can represent biological environment at a glance, by using fuzzy set theory.

KEYWORDS: Biodiversity Index, Fuzzy Biodiversity Index, Fuzzy Set Theory & Shannon Wiener Index

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Original Article

INTRODUCTION

In ecological system aquatic living organisms, non aquatic living organisms and other living organisms form a complex and variable relation, within their own species and with other species too, which is defined as biodiversity. It is a term used to describe the variety of life on earth. It refers to the wide variety of ecosystems and living organisms: animals, plants and their habitats. [3]

The execution of ecosystem depends upon biodiversity. Human life is dependent on biodiversity for survival. We depend on it, for the products for our consumption and for the consumption of other living organisms too. We are also dependent on it for services. Nature gives us air to breath, food and water for survival, and shelter. Protection from natural calamities and stable climatic conditions can be achieved if the biodiversity of the system is rich. For our security and good health also, we depend upon our ecosystem. No one can live, if biodiversity is poor [5]. By changing the stability of biodiversity, we strongly affect human well-being and the well-being of every other living being.

Every decision that affects biodiversity, would affect our lives and the lives of other people. Biodiversity is crucial to human well being, sustainable development and poverty reduction. An ecosystem assessment report says that, we have 5000000 to 30000000 species on earth and out of which, only 1700000 to 2000000 have been identified [7].

CRISP BIODIVERSITY INDEX

A diversity index is a mathematical measure of species diversity, in a community. Diversity indices provide more information about community composition than simply species richness i.e., the number of species present [1]. The Shannon-Wiener Index is one of the several diversity indices used to measure diversity.

Shannon-Wiener Index is commonly used, in the measurement of biodiversity. The advantage of this

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A Fuzzy Approach to Find Land Use Index

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ABSTRACT: In present era land quality is one of the most important environmental issues as the green cover is reducing day by day mainly due to industrialization and urbanization. Industries discharge their effluents either on land or in water body and pollute the land. A thick cover of concrete is covering earthen land gradually. The Traditional report of Land use pattern is prepared by considering number of variables and hence becomes too technical and detailed. For purpose of analysis different indicators of land use pattern are identified and reported on basis of area covered. In present study fuzzy set theory has been used to develop Fuzzy Land Use Index (FLUI) to represent land use pattern of an area. FLUI will help in taking decision about utility of land for developmental activities.

KEYWORDS: Fuzzy Land Use Index, Fuzzy Water Quality Index, Fuzzy Set Theory, Fuzzy Air quality Index, Water Quality Index, Air Quality Index.

I. INTRODUCTION

Every region has its land use plan. Land may be covered by forest; it is used for agriculture, mining operation, residential purpose etc. However, some portion of the land of a particular area is left unutilized with no green cover and no other habitable activity. This is barren land or waste land. When a specific 'developmental activity' is proposed in region, it becomes necessary to determine its Land Use index. The 'developmental activity' may have its impact on land use pattern of surrounding region by using its land for other purposes. It may result in deforestation of the region, conversion of agricultural land to some other purpose, submergence of forest area, agricultural area or industrial area etc.

So far there is no globally accepted Land use pattern measuring system, some countries and regions have used, or are using land use pattern data on basis of percentage analysis. Most land use pattern analysis rely on normalizing, or standardizing, data parameters by parameters according to traditional system having standing boundary conditions and some interpretation of 'good' verses 'bad'

Traditional reports on land use pattern tend to be too detailed, presenting monitoring data on individual substances, without providing a whole and interpreted picture of Land use. However, So far efforts have not been taken to find a single index value to report Land use pattern as has been done to develop Air Quality Index and Water Quality Index by various agencies. In addition to this completely new indices based on fuzzy set theory have also been developed, that is Fuzzy Air quality Index [4] and Fuzzy Water Quality Index [1].

II. FUZZY SET THEORY

Modern world today has realized that the traditional approach of handling the data /information is not sufficed. The traditional knowledge works on the principle of yes or no, this or that, black or white. This traditional way (Boolean), does not take into account the variability between the two extremes. Thus fuzzy logic today has emerged as a valuable tool to handle such information.

Computers operate on a binary true or false basis. Unfortunately our world is not binary. The world we live in is full of ambiguities. "The temperature is quit warm" cannot be evaluated as strictly true or false rather we accept that this statement has certain ambiguities. Thus, the mathematical theory of fuzzy logic was developed. The theory of fuzzy logic basically states that rather than a statement being true or false, each statement has a certain confidence level. For example let's say a confidence value of 0.000 meant false and a confidence value 1.000 meant true, then the

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Privacy and Protection of Mobile Health Data on Secure Cloud Storage

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Abstract— In today's digital world, communication and information technology are growing into an integral part in healthcare. Instead of keeping patient's health record in paper form inside a written file, you can find all patients' related report stored in an organized and systematic database as well defined files using a specific system in almost every clinic. But those paper based files sometimes got misplaced or information was spread up in files in various hospitals so no one could see the whole scenario. From this point we come up with our idea to build security aspects of privacy and auditability into mobile healthcare with the help of secure private cloud storage. The system will offer privacy preserving data storage and retrieval along with efficient key management techniques for misusing the health record.

Key words: Cloud Storage, Mobile Health Data

I. INTRODUCTION

In the past, information about different patients, the diseases they have had, when they had treatment and what medications were prescribed to them by a doctor was written down and kept in files inside hospitals where they have been treated. The defect of trivial file system was that files got misplaced in several hospitals and doctors cannot get a clear picture about patient's history. The aim is to make sure that doctors and other health professionals have the complete information about patient's health record which is important to help them to make the best decisions about the patient, their diseases and their treatment.

The electronic health care systems are dominantly increasing everyday as large amount of personal information for medical purpose are involved and once the health record is exposed to cyberspace it becomes accessible to the outside world. According to analysis of government website [1], around 9 million patient's health record was leaked in past three years. Despite the highest importance, privacy issues are addressed insufficiently at the technical level and efforts to keep health record secure have often fallen short. Automated decision support algorithms in mobile health monitoring [2] which is cloud based was considered future trend.

Unfortunately, the cloud supported mobile-access of health information is promising and offers a great advance in healthcare systems and improves quality of life thus reducing the healthcare costs, there is effective opposing force in making a technology reality. Without properly addressing the health record maintenance and data management the complete health information is subject to get violated during data collection.

This is because protecting privacy in the cyberspace is significantly more challenging. Thus, there is an urgent need for the development of reliable protocols and architectures, which will persuade the privacy and security to stand as a escort against the adversaries and possible threats.

II. LITERATURE SURVEY

As far as necessities of medical services are concerned, one of the earliest works on e-healthcare is medical information privacy assurance (MIPA) [3].It was one of the few works that pointed out the crucial challenges for privacy of medical information. It has also focus on devastating privacy breaches that were caused by inefficient technology. MIPA developed privacy-protecting infrastructures and technology to promote the personalized development of health information. Winandy and colleagues [4] have revealed various drawbacks of current e-health solutions and standards. In particular they have not suggested the client platform security, which is sensitive aspect of security in e-health systems. Liang [5] and colleagues proposed efficient and patient-centric access control scheme which allows information requesters to have different access privileges which is called as role-based access, and then assigns different attribute sets to them. Performance analyses and comprehensive security mechanisms and demonstrate that the scheme is able to achieve desired security requirements with little amount of communication delay.

The cryptographic key-management solution for e-healthcare systems was suggested by lee and lee [6] and in their solution, the trusted server has the ability to access the health data at any time which could result a possible threat. Zhang and colleagues [8] suggested framework for privacy-preserving attribute-based authentication system in e-health networks.

The attribute-based authentication schemes designed for advance privacy levels preserve the more privacy on attributes and attribute values, but cost more computation and communication resources.

Terry and Gunter [9] designed a system so that it precisely captures the state of the patient at all times and represent data in suitable form. The system also had ability to view entire patient's history without the need to keep track of patient's past medical data volume. It also assists in ensuring data is accurate, appropriate and legal. It has significantly reduced the chances of data replication as there is only one modifiable file, which termed as the file is updated constantly when viewed at a later date or day and removed the issue of lost forms or paperwork.

Ren and colleagues [10] proposed e-health care system to which allows patients to encrypt their personal health records (PHR) before storing it on central authority. Because of the fact that the encrypted PHR inhibit the centralized server from obtaining the data it still faces the problem of data verification. Another drawback of this scheme is that it is vulnerable to single point of failure.

The concept of patient controlled encryption (PCE) was suggested by Horvitz [11] in which the health records are divided into hierarchy of smaller piece of information which will be encrypted using the key which is concealed by patient's control. They provided a symmetric-key PCE for