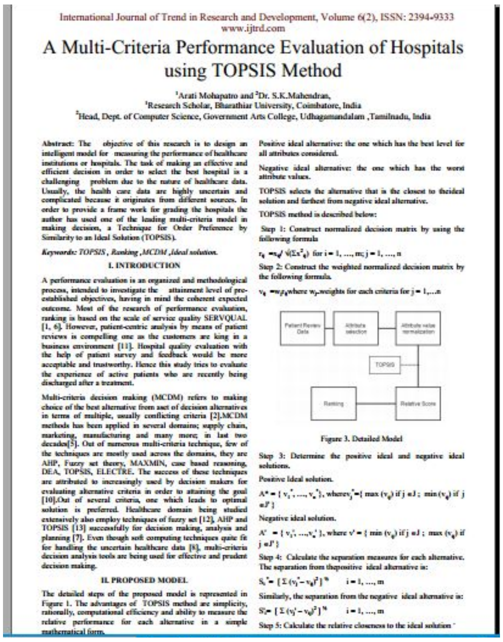
3.3.4 Number of research papers per teacher in the Journals notified on UGC website during the last five years (8)

1**. A Multi-Criteria Performance Evaluation of Hospitals using TOPSIS Method**

Arati Mohapatro and Dr. S. K. Mahendran.



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A Multi-Criteria Performance Evaluation of Hospitals using TOPSIS Method

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Abstract: The objective of this research is to design an intelligent model for measuring the performance of healthcare institutions or hospitals. The task of making an effective and efficient decision in order to select the best hospital is a challenging problem due to the nature of healthcare data. Usually, the health care data are highly uncertain and complicated because it originates from different sources. In order to provide a frame work for grading the hospitals the author has used one of the leading multi-criteria model in making decision, a Technique for Order Preference by Similarity to an Ideal Solution (TOPSIS).

Keywords: TOPSIS , Ranking ,MCDM ,Ideal solution.

I. INTRODUCTION

A performance evaluation is an organized and methodological process, intended to investigate the attainment level of pre-established objectives, having in mind the coherent expected outcome. Most of the research of performance evaluation, ranking is based on the scale of service quality SERVQUAL [1, 6]. However, patient-centric analysis by means of patient reviews is compelling one as the customers are king in a business environment [11]. Hospital quality evaluation with the help of patient survey and feedback would be more acceptable and trustworthy. Hence this study tries to evaluate the experience of active patients who are recently being discharged after a treatment.

Multi-criteria decision making (MCDM) refers to making choice of the best alternative from aset of decision alternatives in terms of multiple, usually conflicting criteria [2].MCDM methods has been applied in several domains; supply chain, marketing, manufacturing and many more; in last two decades[5]. Out of numerous multi-criteria technique, few of the techniques are mostly used across the domains, they are AHP, Fuzzy set theory, MAXMIN, case based reasoning, DEA, TOPSIS, ELECTRE. The success of these techniques are attributed to increasingly used by decision makers for evaluating alternative criteria in order to attaining the goal [10].Out of several criteria, one which leads to optimal solution is preferred. Healthcare domain being studied extensively also employ techniques of fuzzy set [12], AHP and TOPSIS [13] successfully for decision making, analysis and planning [7]. Even though soft computing techniques quite fit for handling the uncertain healthcare data [8], multi-criteria decision analysis tools are being used for effective and prudent decision making.

II. PROPOSED MODEL

The detailed steps of the proposed model is represented in Figure 1. The advantages of TOPSIS method are simplicity, rationally, computational efficiency and ability to measure the relative performance for each alternative in a simple mathematical form.

Positive ideal alternative: the one which has the best level for all attributes considered.

Negative ideal alternative: the one which has the worst attribute values.

TOPSIS selects the alternative that is the closest to theideal solution and farthest from negative ideal alternative.

TOPSIS method is described below:

Step 1: Construct normalized decision matrix by using the following formula

$r_{ij} = x_{ij} / \sqrt{(\Sigma x^2_{ij})}$ for i = 1, …, m; j = 1, …, n

Step 2: Construct the weighted normalized decision matrix by the following formula.

$v_{ij} = w_j r_{ij}$ where w_j-weights for each criteria for j = 1,…n

Figure 3. Detailed Model

Step 3: Determine the positive ideal and negative ideal solutions.

Positive Ideal solution.

$A^* = \{ v_1^*, …, v_n^* \}$, where $v_j^* = \{ \max (v_{ij})$ if $j \in J$; $\min (v_{ij})$ if $j \in J' \}$

Negative ideal solution.

$A' = \{ v_1', …, v_n' \}$, where $v' = \{ \min (v_{ij})$ if $j \in J$; $\max (v_{ij})$ if $j \in J' \}$

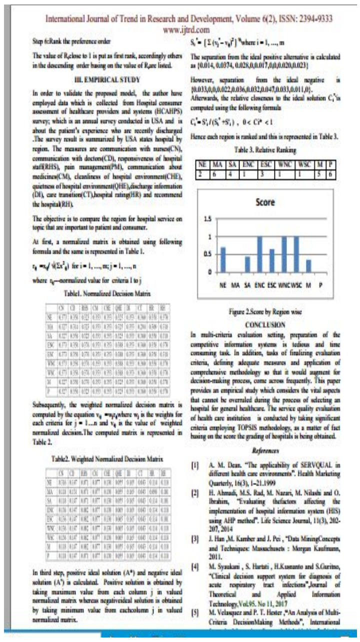
Step 4: Calculate the separation measures for each alternative. The separation from thepositive ideal alternative is:

$S_i^* = [\Sigma (v_j^* - v_{ij})^2]^{½}$ i = 1, …, m

Similarly, the separation from the negative ideal alternative is:

$S_i' = [\Sigma (v_j' - v_{ij})^2]^{½}$ i = 1, …, m

Step 5: Calculate the relative closeness to the ideal solution



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Step 6:Rank the preference order

The value of $R_i$close to 1 is put as first rank, accordingly others in the descending order basing on the value of $R_i$are listed.

III. EMPIRICAL STUDY

In order to validate the proposed model, the author have employed data which is collected from Hospital consumer assessment of healthcare providers and systems (HCAHPS) survey; which is an annual survey conducted in USA and is about the patient's experience who are recently discharged .The survey result is summarized by USA states hospital by region. The measures are communication with nurses(CN), communication with doctors(CD), responsiveness of hospital staff(RHS), pain management(PM), communication about medicines(CM), cleanliness of hospital environment(CHE), quietness of hospital environment(QHE),discharge information (DI), care transition(CT),hospital rating(HR) and recommend the hospital(RH).

The objective is to compare the region for hospital service on topic that are important to patient and consumer.

At first, a normalized matrix is obtained using following formula and the same is represented in Table 1.

$r_{ij} = x_{ij} / \sqrt{(\Sigma x^2_{ij})}$ for i = 1, …, m; j = 1, …, n

where r_{ij}—normalized value for criteria I to j

Table1. Normalized Decision Matrix

	CN	CD	RHS	CM	CHE	QHE	DI	CT	HR	RH
NE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ESC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ENC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WNC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WSC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
M	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
P	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Subsequently, the weighted normalized decision matrix is computed by the equation $v_{ij} = w_j r_{ij}$where w_j is the weights for each criteria for j = 1…n and v_{ij} is the value of weighted normalized decision.The computed matrix is represented in Table 2.

Table2. Weighted Normalized Decision Matrix

	CN	CD	RHS	CM	CHE	QHE	DI	CT	HR	RH
NE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ENC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ESC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WNC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WSC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
M	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
P	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

In third step, positive ideal solution (A*) and negative ideal solution (A') is calculated. Positive solution is obtained by taking maximum value from each column j in valued normalized matrix whereas negativeideal solution is obtained by taking minimum value from eachcolumn j in valued normalized matrix.

$S_i^* = [\Sigma (v_j^* - v_{ij})^2]^{½}$ where i = 1, …, m

The separation from the ideal positive alternative is calculated as {0.014, 0.0374, 0.028,0,0.017,0,0,0.020,0.023}

However, separation from the ideal negative is {0.033,0,0,0.022,0.036,0.032,0.047,0.033,0.011,0}.
Afterwards, the relative closeness to the ideal solution $C_i^*$is computed using the following formula

$C_i^* = S_i' / (S_i^* + S_i')$, $0 < Ci^* < 1$

Hence each region is ranked and this is represented in Table 3.

Table 3. Relative Ranking

NE	MA	SA	ENC	ESC	WNC	WSC	M	P
2	6	4	1	3	1	1	5	6

Figure 2.Score by Region wise

CONCLUSION

In multi-criteria evaluation setting, preparation of the competitive information systems is tedious and time consuming task. In addition, tasks of finalizing evaluation criteria, defining adequate measures and application of comprehensive methodology so that it would augment for decision-making process, come across frequently. This paper provides an empirical study which considers the vital aspects that cannot be overruled during the process of selecting an hospital for general healthcare. The service quality evaluation of health care institution is conducted by taking significant criteria employing TOPSIS methodology, as a matter of fact basing on the score the grading of hospitals is being obtained.

References

[1] A. M. Dean. "The applicability of SERVQUAL in different health care environments". Health Marketing Quarterly, 16(3), 1–21.1999

[2] H. Ahmadi, M.S. Rad, M. Nazari, M. Nilashi and O. Ibrahim, "Evaluating thefactors affecting the implementation of hospital information system (HIS) using AHP method". Life Science Journal, 11(3), 202-207, 2014

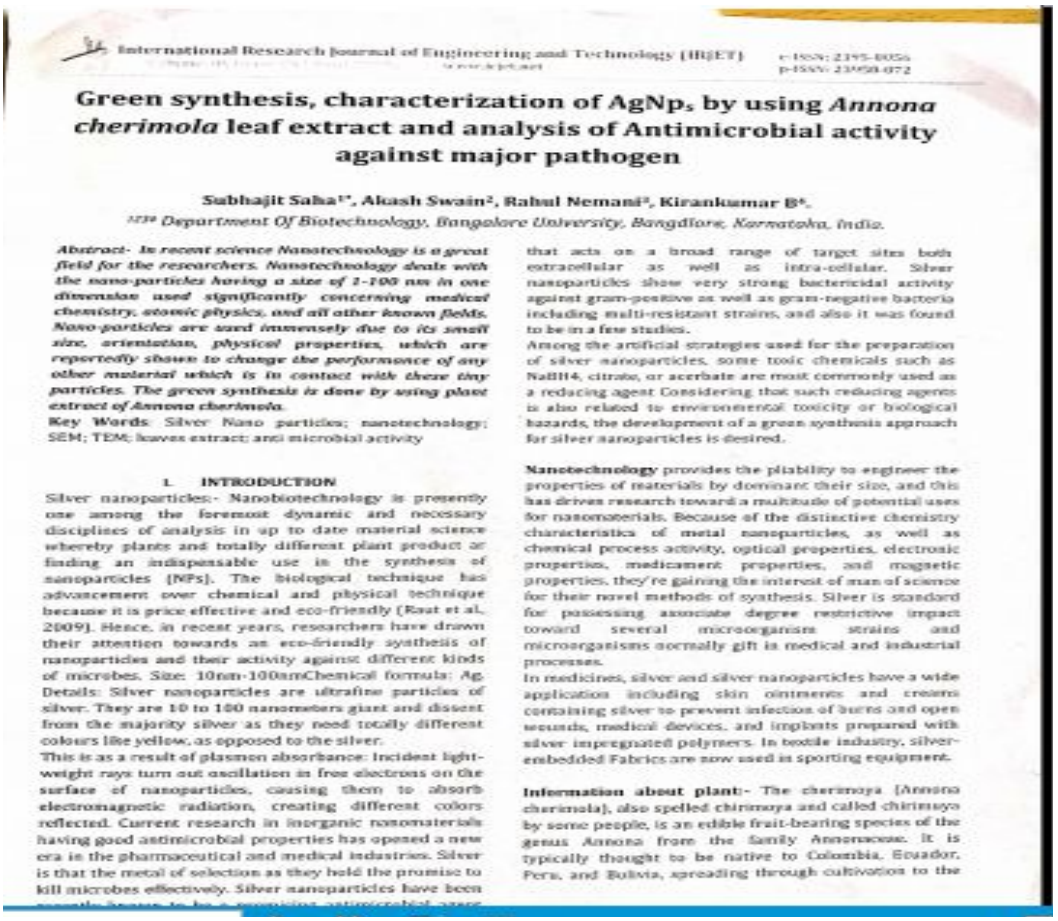
[3] J. Han ,M. Kamber and J. Pei , "Data MiningConcepts and Techniques: Massachusets : Morgan Kaufmann, 2011.

[4] M. Syaukani , S. Hartati , H.Kusnanto and S.Gurino, "Clinical decision support system for diagnosis of acute respiratory tract infections",Journal of Theoretical and Applied Information Technology,Vol.95. No 11, 2017

[5] M. Velasquez and P. T. Hester ,"An Analysis of Multi-Criteria DecisionMaking Methods", International

2. Green synthesis, characterization of AgNps by using Annona cherimola leaf extract and analysis of Antimicrobial activity against major pathogen.

Subhajit Saha, Akash Swain, Rahul Nemani, Kirankumar B.



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Green synthesis, characterization of AgNps by using *Annona cherimola* leaf extract and analysis of Antimicrobial activity against major pathogen

Subhajit Saha[1*], Akash Swain[2], Rahul Nemani[3], Kirankumar B[4].
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Abstract *- In recent science Nanotechnology is a great field for the researchers. Nanotechnology deals with the nano-particles having a size of 1-100 nm in one dimension used significantly concerning medical chemistry, atomic physics, and all other known fields. Nano-particles are used immensely due to its small size, orientation, physical properties, which are reportedly shown to change the performance of any other material which is in contact with these tiny particles. The green synthesis is done by using plant extract of Annona cherimola.*

Key Words: Silver Nano particles; nanotechnology; SEM; TEM; leaves extract; anti microbial activity

I. INTRODUCTION

Silver nanoparticles:- Nanobiotechnology is presently one among the foremost dynamic and necessary disciplines of analysis in up to date material science whereby plants and totally different plant product or finding an indispensable use in the synthesis of nanoparticles (NPs). The biological technique has advancement over chemical and physical technique because it is price effective and eco-friendly (Raut et al, 2009). Hence, in recent years, researchers have drawn their attention towards an eco-friendly synthesis of nanoparticles and their activity against different kinds of microbes. Size: 10nm-100nmChemical formula: Ag. Details: Silver nanoparticles are ultrafine particles of silver. They are 10 to 100 nanometers giant and dissent from the majority silver as they need totally different colours like yellow, as opposed to the silver.

This is as a result of plasmon absorbance: Incident light-weight rays turn out oscillation in free electrons on the surface of nanoparticles, causing them to absorb electromagnetic radiation, creating different colors reflected. Current research in inorganic nanomaterials having good antimicrobial properties has opened a new era in the pharmaceutical and medical industries. Silver is that the metal of selection as they hold the promise to kill microbes effectively. Silver nanoparticles have been recently known to be a promising antimicrobial agent that acts on a broad range of target sites both extracellular as well as intra-cellular. Silver nanoparticles show very strong bactericidal activity against gram-positive as well as gram-negative bacteria including multi-resistant strains, and also it was found to be in a few studies.

Among the artificial strategies used for the preparation of silver nanoparticles, some toxic chemicals such as NaBH4, citrate, or acerbate are most commonly used as a reducing agent Considering that such reducing agents is also related to environmental toxicity or biological hazards, the development of a green synthesis approach for silver nanoparticles is desired.

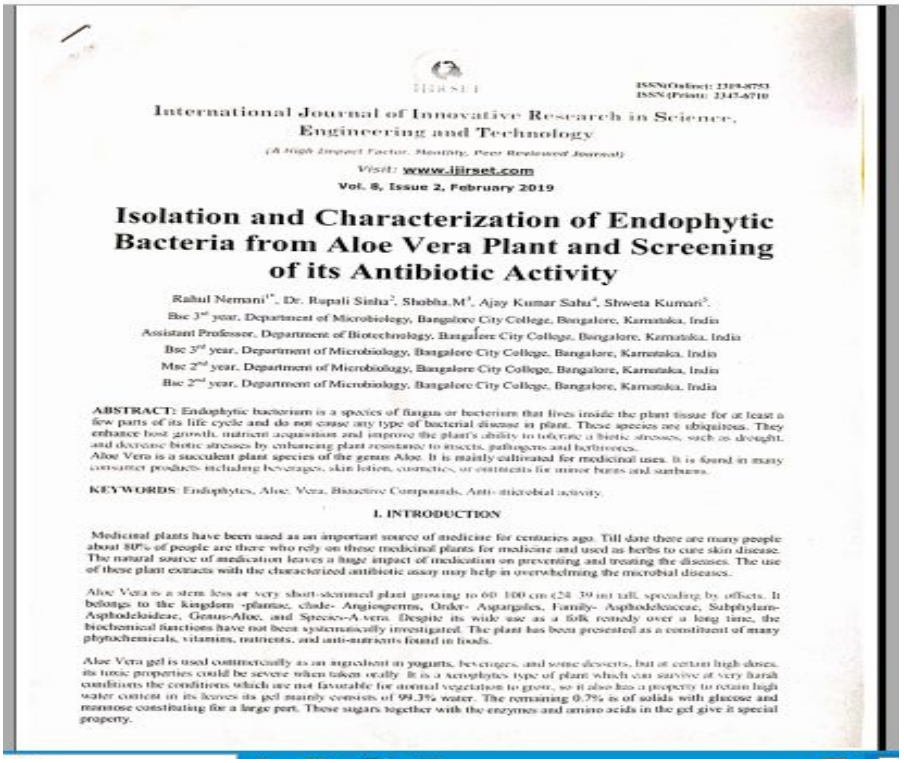
Nanotechnology provides the pliability to engineer the properties of materials by dominant their size, and this has driven research toward a multitude of potential uses for nanomaterials. Because of the distinctive chemistry characteristics of metal nanoparticles, as well as chemical process activity, optical properties, electronic properties, medicament properties, and magnetic properties, they're gaining the interest of man of science for their novel methods of synthesis. Silver is standard for possessing associate degree restrictive impact toward several microorganism strains and microorganisms normally gift in medical and industrial processes.

In medicines, silver and silver nanoparticles have a wide application including skin ointments and creams containing silver to prevent infection of burns and open wounds, medical devices, and implants prepared with silver impregnated polymers. In textile industry, silver-embedded Fabrics are now used in sporting equipment.

Information about plant:- The cherimoya (Annona cherimola), also spelled chirimoya and called chirimoyo by some people, is an edible fruit-bearing species of the genus Annona from the family Annonaceae. It is typically thought to be native to Colombia, Ecuador, Peru, and Bolivia, spreading through cultivation to the

3. Isolation and Characterization of Endophytic Bacteria from Aloe Vera Plant and Screening of its Antibiotic Activity.

Rahul Nemani, Dr. Rupali Sinha2, Shobha.M3, Ajay Kumar Sahu4, Shweta Kumari5.



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Isolation and Characterization of Endophytic Bacteria from Aloe Vera Plant and Screening of its Antibiotic Activity

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ABSTRACT: Endophytic bacterium is a species of fungus or bacterium that lives inside the plant tissue for at least a few parts of its life cycle and do not cause any type of bacterial disease in plant. These species are ubiquitous. They enhance host growth, nutrient acquisition and improve the plant's ability to tolerate a biotic stresses, such as drought, and decrease biotic stresses by enhancing plant resistance to insects, pathogens and herbivores.
Aloe Vera is a succulent plant species of the genus Aloe. It is mainly cultivated for medicinal uses. It is found in many consumer products including beverages, skin lotion, cosmetics, or ointments for minor burns and sunburns.

KEYWORDS: Endophytes, Aloe. Vera, Bioactive Compounds, Anti- microbial activity.

I. INTRODUCTION

Medicinal plants have been used as an important source of medicine for centuries ago. Till date there are many people about 80% of people are there who rely on these medicinal plants for medicine and used as herbs to cure skin disease. The natural source of medication leaves a huge impact of medication on preventing and treating the diseases. The use of these plant extracts with the characterized antibiotic assay may help in overwhelming the microbial diseases.

Aloe Vera is a stem less or very short-stemmed plant growing to 60–100 cm (24–39 in) tall, spreading by offsets. It belongs to the kingdom -plantae, clade- Angiosperms, Order- Asparagales, Family- Asphodelaceae, Subphylum- Asphodeloideae, Genus-Aloe, and Species-A vera. Despite its wide use as a folk remedy over a long time, the biochemical functions have not been systematically investigated. The plant has been presented as a constituent of many phytochemicals, vitamins, nutrients, and anti-nutrients found in foods.

Aloe Vera gel is used commercially as an ingredient in yogurts, beverages, and some desserts, but at certain high doses, its toxic properties could be severe when taken orally. It is a xerophytes type of plant which can survive at very harsh conditions the conditions which are not favorable for normal vegetation to grow, so it also has a property to retain high water content in its leaves its gel mainly consists of 99.3% water. The remaining 0.7% is of solids with glucose and mannose constituting for a large part. These sugars together with the enzymes and amino acids in the gel give it special property.

4**. A Comparative Study on the Effect of Organic Matter and pH on The Microbial Diversity in the Different Stations of Marlimund Lake, Ooty**

Prescilla Devapriya. J B.D. Sheeja Burranboina Kirankumar.

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A Comparative Study on the Effect of Organic Matter and pH on The Microbial Diversity in the Different Stations of Marlimund Lake, Ooty, The Nilgiris.

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Abstract: The present study was aimed to investigate the organic matter, pH effect on microbial diversity throughout the year Marlimund lake, Marlimund, Ooty, Nilgiris is an in the Udhagamandalam City in Tamil Nadu State, India. Microorganisms are involved in a variety of biogeochemical processes in natural environments. The dissolved organic matter is primarily composed of soluble portions of the fresh plant and animal residues. The particulate organic matter is partially resistant to microbial decomposition and serves as an important long-term supply of nutrients. Marlimund Reservoir is an important reservoir of water and a typical eutrophic freshwater lake. From the lake, soil samples were collected on a monthly basis, analyzed and recorded. The results were shown organic matter is directly proportioned to microbial diversity. And shows that the analyzed reservoir four Stations was influenced by the bacterial community, pH, and organic matter content, whereas comparatively little change was observed among IV stations in stratified conditions.

Key words: Marlimund lake, Organic matter, pH, Monthly variations and Microbial diversity.

I. INTRODUCTION:

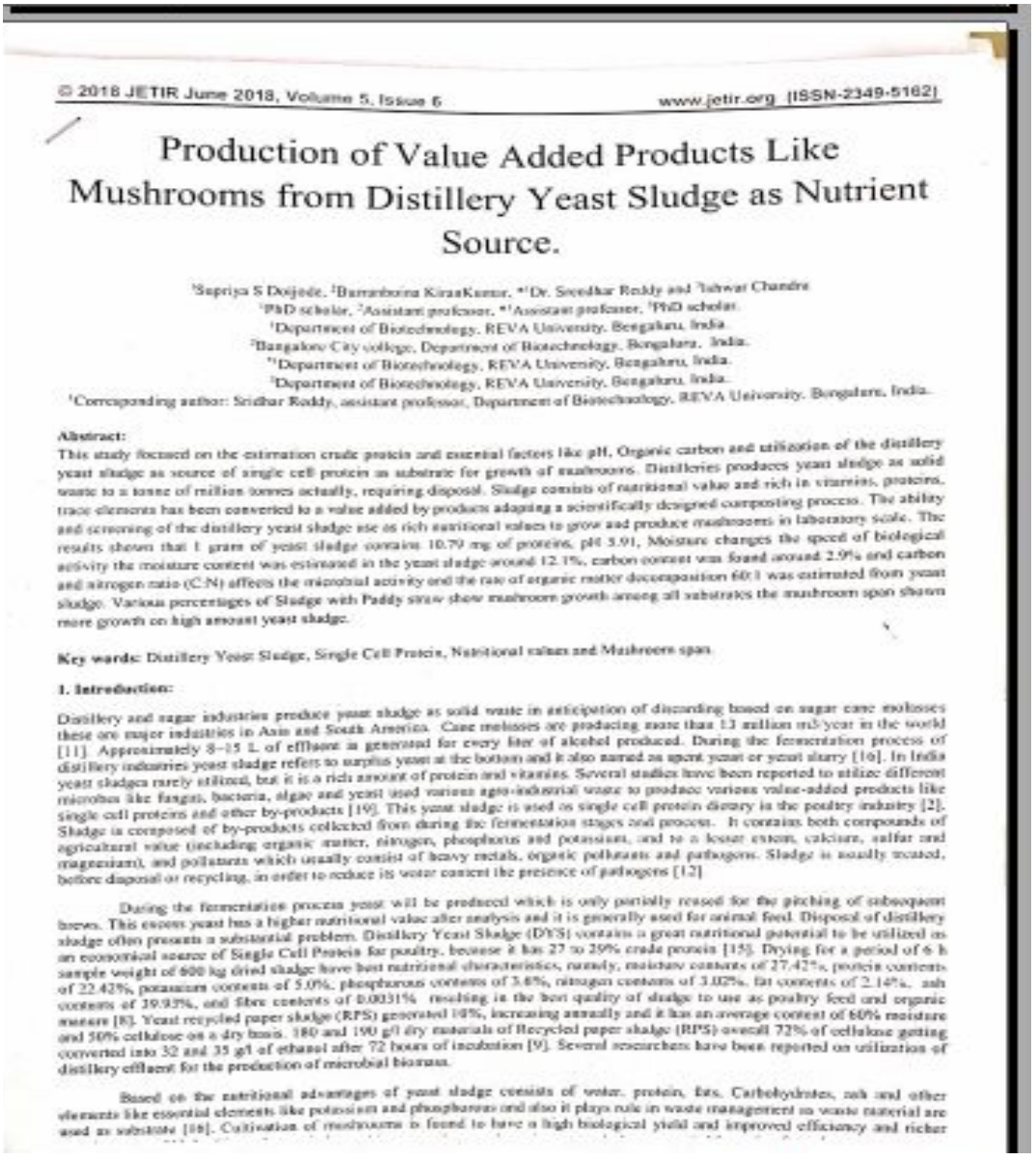
Aquatic ecosystems are dynamics and complex ecosystems that can share physical characteristics like sedimentation-resuspension, gas balance, water circulation, dilution, chemical characteristics like pH, organic matter decomposition and ecological characteristics like food web structure, prey-predator relationship with other aquatic ecosystems. In an aquatic ecosystem individual lakes are often chemically and physically distinct, even within the same geographic region [6]. There is a variety of organisms like flora (plant and bacteria) and fauna lives in water. Prokaryotes are among the most important contributors to the revolution of complex organic compounds and minerals in freshwater sediments [18, 22].

The important factors like pH and Organic matter, determining bacterial community composition in water and soil [2]. The organic fraction of the sediment is mainly of terrestrial origin shows the content of organic matter in the sediment is the highest level in areas with higher Carbon and Nitrogen ratio. The quantities of organic matter from simple nutrient elements Carbon, Nitrogen and Phosphorus with repercussion on food chains and the quality of the water [14]. Biotic and abiotic factors regulate temporal and spatial shifts of microbial communities as well as organic matter in lakes is prone to extensive chemical transformations during and after sedimentation in aquatic environments [9]. These processes are mediated by heterotrophic bacteria. Microbial processes in sediments exert widespread geochemical and ecological effects [11]. Mineralization of the organic matter by Microbial and photochemical contributes to the flux of greenhouse gases from the lakes to the atmosphere [12]. Dissolved Organic Carbon and Dissolved Organic Matter have been found to shape microbial community composition depending upon carbon source and concentration [6]. When organic residues decompose, organic carbon and nutrients are either released for plant uptake or transferred to a more stable Soil Organic Matter pool.

Microorganisms are involved in a variety of biogeochemical processes in natural environments [21].This process produces carbon dioxide through microbial respiration and chemical oxidation, which is eventually released into the air. In freshwater Phosphorus (P) is generally considered to be the limiting nutrient for plant growth with small quantities occurring naturally mainly from geological sources. Plants were used nitrates is the primary form of nitrogen as a nutrient to stimulate growth. Excessive amounts of nitrogen may result in phytoplankton or macrophyte proliferations. pH is the measurement of the hydrogen-ion concentration in the water. A pH below 7 is acidic and a pH above 7 to 14 is basic. It is a measure of the soil, water together with its dissolved substances acidity and alkalinity, on a scale from 0 to 14. pH varies depending on the geology of the river catchment, on river flow, and on wastewater discharges, but is generally in the range 6 – 9. It can also be influenced by biological processes, chiefly carbon dioxide uptake by plants during photosynthesis. Microbial communities can drive the recycling of nutrients and regulate the water quality In the freshwater ecosystem [4, 15], in

5. Production of Value Added Products Like Mushrooms from Distillery Yeast Sludge as Nutrient Source.

Supriya S Doijode, Burranboina KiranKumar, Dr. Sreedhar Reddy, Ishwar Chandra.



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Production of Value Added Products Like Mushrooms from Distillery Yeast Sludge as Nutrient Source.

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Abstract:
This study focused on the estimation crude protein and essential factors like pH, Organic carbon and utilization of the distillery yeast sludge as source of single cell protein as substrate for growth of mushrooms. Distilleries produces yeast sludge as solid waste to a tonne of million tonnes actually, requiring disposal. Sludge consists of nutritional value and rich in vitamins, proteins, trace elements has been converted to a value added by products adopting a scientifically designed composting process. The ability and screening of the distillery yeast sludge use as rich nutritional values to grow and produce mushrooms in laboratory scale. The results shown that 1 gram of yeast sludge contains 10.79 mg of protein, pH 5.91, Moisture changes the speed of biological activity the moisture content was estimated in the yeast sludge around 12.1%, carbon content was found around 2.9% and carbon and nitrogen ratio (C:N) affects the microbial activity and the rate of organic matter decomposition 60:1 was estimated from yeast sludge. Various percentages of Sludge with Paddy straw show mushroom growth among all substrates the mushroom spon shown more growth on high amount yeast sludge.

Key words: Distillery Yeast Sludge, Single Cell Protein, Nutritional values and Mushroom spon.

1. Introduction:

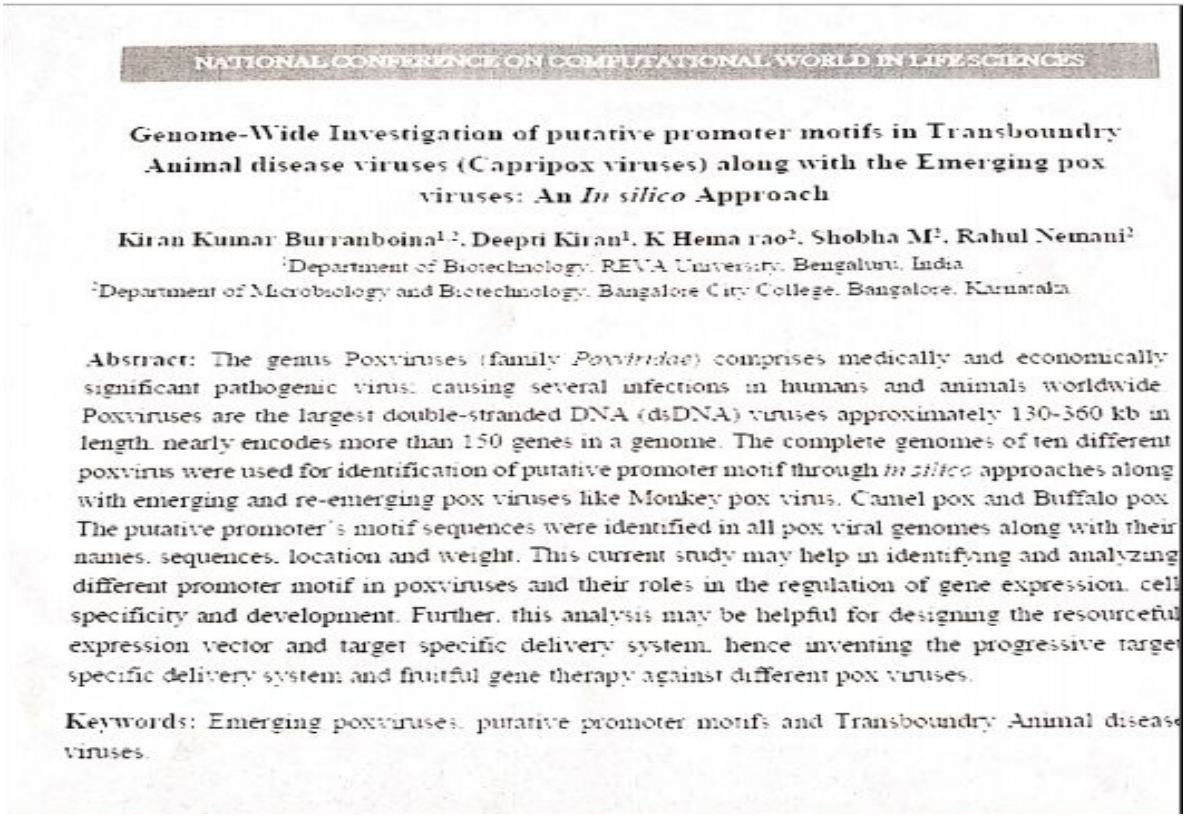
Distillery and sugar industries produce yeast sludge as solid waste in anticipation of discarding based on sugar cane molasses these are major industries in Asia and South America. Cane molasses are producing more than 13 million m3/year in the world [11]. Approximately 8–15 L of effluent is generated for every liter of alcohol produced. During the fermentation process of distillery industries yeast sludge refers to surplus yeast at the bottom and it also named as spent yeast or yeast slurry [16]. In India yeast sludges rarely utilized, but it is a rich amount of protein and vitamins. Several studies have been reported to utilize different microbes like fungal, bacteria, algae and yeast used various agro-industrial waste to produce various value-added products like single cell proteins and other by-products [19]. This yeast sludge is used as single cell protein dietary in the poultry industry [2]. Sludge is composed of by-products collected from during the fermentation stages and process. It contains both compounds of agricultural value (including organic matter, nitrogen, phosphorus and potassium, and to a lesser extent, calcium, sulfur and magnesium), and pollutants which usually consist of heavy metals, organic pollutants and pathogens. Sludge is usually treated, before disposal or recycling, in order to reduce its water content the presence of pathogens [12]

During the fermentation process yeast will be produced which is only partially reused for the pitching of subsequent brews. This excess yeast has a higher nutritional value after analysis and it is generally used for animal feed. Disposal of distillery sludge often presents a substantial problem. Distillery Yeast Sludge (DYS) contains a great nutritional potential to be utilized as an economical source of Single Cell Protein for poultry, because it has 27 to 29% crude protein [15]. Drying for a period of 6 h sample weight of 600 kg dried sludge have best nutritional characteristics, namely, moisture contents of 27.42%, protein contents of 22.42%, potassium contents of 5.0%, phosphorous contents of 3.6%, nitrogen contents of 3.02%, fat contents of 2.14%, ash contents of 39.93%, and fibre contents of 0.0031% resulting in the best quality of sludge to use as poultry feed and organic manure [8]. Yeast recycled paper sludge (RPS) generated 10%, increasing annually and it has an average content of 60% moisture and 50% cellulose on a dry basis. 180 and 190 g/l dry materials of Recycled paper sludge (RPS) overall 72% of cellulose getting converted into 32 and 35 g/l of ethanol after 72 hours of incubation [9]. Several researchers have been reported on utilization of distillery effluent for the production of microbial biomass.

Based on the nutritional advantages of yeast sludge consists of water, protein, fats, Carbohydrates, ash and other elements like essential elements like potassium and phosphorous and also it plays role in waste management as waste material are used as substrate [10]. Cultivation of mushrooms is found to have a high biological yield and improved efficiency and richer

6. Genome Wide Analysis Of Microsatellite Repeats In The Paramyxomaviridae Family Viruses: An Insilico Approach

KiranKumar Burranboina, Akash Swain, Arnika Swain, Ajay kumar sahu, Anadi, Vishwanath T, Shilpa BR.



Genome-Wide Investigation of putative promoter motifs in Transboundry Animal disease viruses (Capripox viruses) along with the Emerging pox viruses: An *In silico* Approach

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Abstract: The genus Poxviruses (family *Poxviridae*) comprises medically and economically significant pathogenic virus: causing several infections in humans and animals worldwide. Poxviruses are the largest double-stranded DNA (dsDNA) viruses approximately 130-360 kb in length. nearly encodes more than 150 genes in a genome. The complete genomes of ten different poxvirus were used for identification of putative promoter motif through *in silico* approaches along with emerging and re-emerging pox viruses like Monkey pox virus, Camel pox and Buffalo pox. The putative promoter's motif sequences were identified in all pox viral genomes along with their names, sequences, location and weight. This current study may help in identifying and analyzing different promoter motif in poxviruses and their roles in the regulation of gene expression, cell specificity and development. Further, this analysis may be helpful for designing the resourceful expression vector and target specific delivery system, hence inventing the progressive target specific delivery system and fruitful gene therapy against different pox viruses.

Keywords: Emerging poxviruses, putative promoter motifs and Transboundry Animal disease viruses.

7. A Decision Making Mechanism during Disaster Event Monitoring and Control

T.K.Das , Arati Mohapatro and Sunitha Abburu

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A Decision Making Mechanism During Disaster Event Monitoring and Control

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Abstract: In this paper, a novel approach is being presented for handling man made disaster resulting out of propagating sensitive information and rumor. Our approach is based on intuitionistic fuzzy sets, which well handle uncertainty aspects of the underlying data. Furthermore, the technique of the rough set with intuitionistic fuzzy value is being used for measuring the wider public sentiments and also prioritizing the decision making strategy. Generally, the public sentiments are linguistic and highly uncertain in nature. In order to cope this, rough set technique with intuitionistic fuzzy approximation space has been employed. This has been illustrated by the help of an empirical study. This study would be useful in managing the impending disaster proactively.

Key words: Intuitionistic Fuzzy Set · Rough Set · Public Sentiment · Sentiment Severity

INTRODUCTION

Public sentiment and opinion have always been a sought-after study for most of the types of analysis, whether Government organization or corporate or business establishments. Hence sentiment analysis and opinion mining has become very popular research issue. It is well known that uncontrolled negative sentiment any time triggers an event which leads to social unrest. It can go a long way in damaging the societal structure even leading to violence and hence economic and financial turmoil. In order to avoid the abrupt events to cause damage, there is a need of disaster control measure like calculating the risk factor and urgent decision making mechanism. However, it is very important to keep the eye and ear open so that public sentiment analysis and decision making could be done at the right time in an effective manner. Though sentiment analysis is a technique to evaluate the sentiment polarity of the public towards a product or a service, but this process only determines the sentiment orientation like positive, negative or neutral [1]. However, the intensity level of sentiments is very hard to determine [2].

So, in order to avoid or decrease the risk of emergency and to make urgent decision [3], there is immediate need to analyze and control the network public sentiment effectively. Some of the work has been carried out by Zeng and Xu [4], Zeng [5] and Zhang [6] in this area. Their work relates to methods of selecting sentiment indexes and determining their weights for network sentiment emergency. Peng [7], Zhang and Qi [8] discussed the close relationship between network public sentiment and emergency. Also few works [9, 10] have been proposed related to early warning decision methods for network emergency. Most of these early warning mechanisms and hence decision making can deal with situation under certain and precise conditions. But due to the lack of knowledge of the problem domain, disaster activities are involved with various uncertain factors. So, in this research a fuzzy risk factor is being considered for prioritizing and addressing the events.

Intuitionistic fuzzy set proposed by Atanasov [11] has been found useful in dealing with imperfectly defined facts and data and also for vague and imprecise knowledge. It is the generalization of ordinary fuzzy set of Zadeh [12] and has been applied extensively in decision making, pattern recognition and diagnosis problems.

The rest of the paper is organized as follows. In section II, concept of intuitionistic fuzzy set is presented. Also we have recalled definition of Rough set in this section. The strength of Rough set lies in approximating a target set by calculating its lower and

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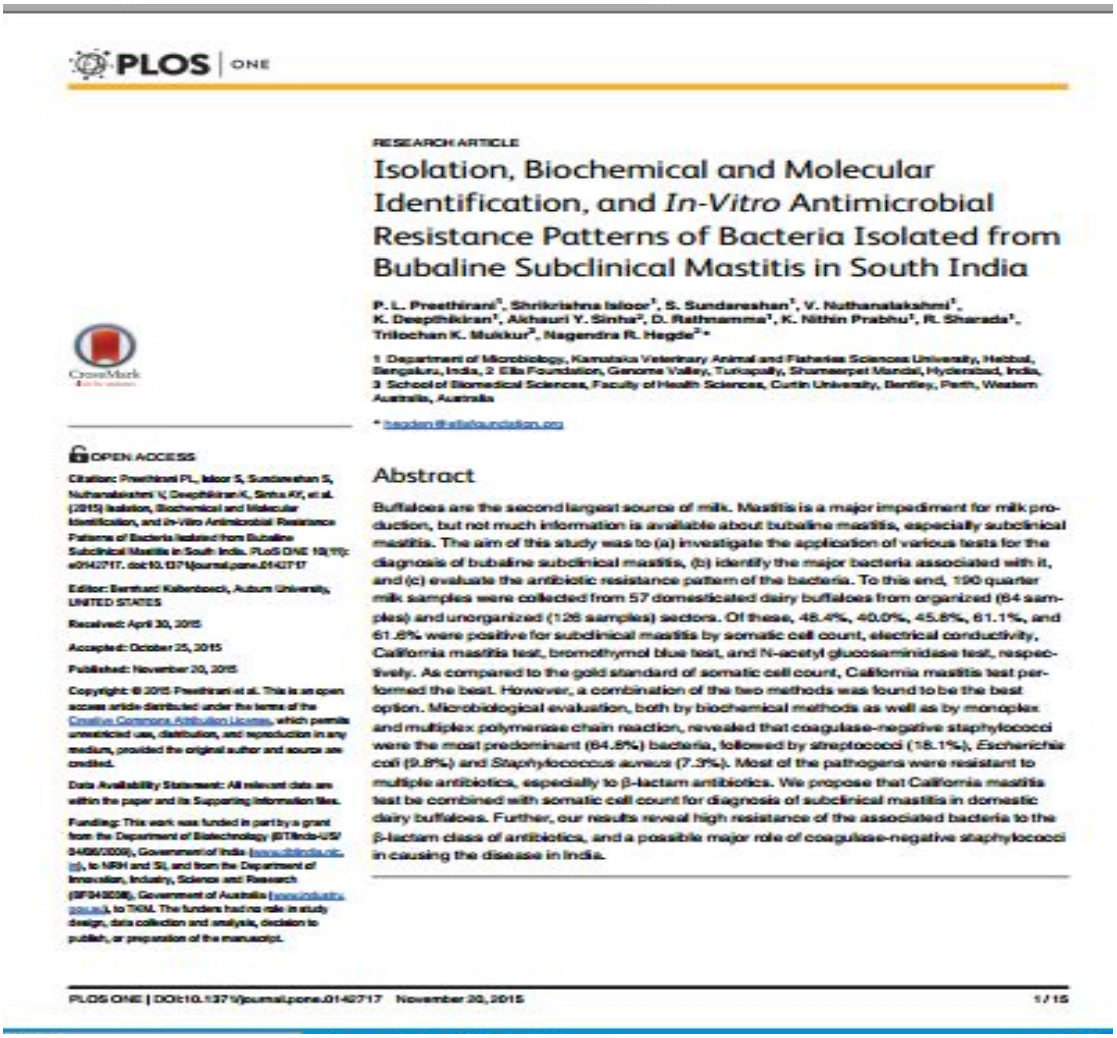
8. Isolation, Biochemical and Molecular Identification, and In-itroAntimicrobial Resistance Patterns of Bacteria Isolated from Bubaline Subclinical Mastitis in South India.

K. Deepthi kiran,v P. L. Preethirani 1 , Shrikrishna Isloor



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RESEARCH ARTICLE

Isolation, Biochemical and Molecular Identification, and *In-Vitro* Antimicrobial Resistance Patterns of Bacteria Isolated from Bubaline Subclinical Mastitis in South India

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Abstract

Buffaloes are the second largest source of milk. Mastitis is a major impediment for milk production, but not much information is available about bubaline mastitis, especially subclinical mastitis. The aim of this study was to (a) investigate the application of various tests for the diagnosis of bubaline subclinical mastitis, (b) identify the major bacteria associated with it, and (c) evaluate the antibiotic resistance pattern of the bacteria. To this end, 190 quarter milk samples were collected from 57 domesticated dairy buffaloes from organized (64 samples) and unorganized (126 samples) sectors. Of these, 48.4%, 40.0%, 45.8%, 61.1%, and 61.6% were positive for subclinical mastitis by somatic cell count, electrical conductivity, California mastitis test, bromothymol blue test, and N-acetyl glucosaminidase test, respectively. As compared to the gold standard of somatic cell count, California mastitis test performed the best. However, a combination of the two methods was found to be the best option. Microbiological evaluation, both by biochemical methods as well as by monoplex and multiplex polymerase chain reaction, revealed that coagulase-negative staphylococci were the most predominant (64.8%) bacteria, followed by streptococci (18.1%), *Escherichia coli* (9.8%) and *Staphylococcus aureus* (7.3%). Most of the pathogens were resistant to multiple antibiotics, especially to β-lactam antibiotics. We propose that California mastitis test be combined with somatic cell count for diagnosis of subclinical mastitis in domestic dairy buffaloes. Further, our results reveal high resistance of the associated bacteria to the β-lactam class of antibiotics, and a possible major role of coagulase-negative staphylococci in causing the disease in India.

9. A Study on Big Data Integration with Data Warehouse.
T.K.Das and Arati Mohapatro

A Study on Big Data Integration with Data Warehouse

T.K.Das[1] and Arati Mohapatro[2]
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Abstract - *The amount of data in world is exploding. Data is being collected and stored at unprecedented rates. The challenge is not only to store and manage the vast volume of data, but also to analyze and extract meaningful value from it. In the last decade Data Warehousing technology has been evolved for efficiently storing the data from different sources for business intelligence purpose. In the Age of the Big Data, it is important to remodel the existing warehouse system that will help you and your organization make the most of unstructured data with your existing Data Warehouse. As Big Data continues to revolutionize how we use data, this paper addresses how to leverage big data by effectively integrating it to your data warehouse.*

Keywords *- Big Data, Data warehouse, Hadoop*

1. INTRODUCTION

We have data warehouses built using relational technology mainly for operational sources. Big data comes from relatively new types of data sources like social media, public filings, content available in the public domain through agencies or subscriptions, documents and e-mails including both structured and unstructured texts, digital devices and sensors including location-based smart phone, weather and telemetric data .Companies aren't accustomed to collecting information from these sources, nor are they used to dealing with such large volumes of unstructured data. Therefore, much of the information available to enterprises isn't captured or stored for long-term analysis, and opportunities for gaining insight are missed. Because of the huge data volumes, many companies do not keep their big data, and thus do not realize any value out of this. Big Companies that want to truly benefit from big data must also integrate these new types of information with traditional corporate data, and fit the insight they glean into their existing business processes and operations.There are several approaches to collecting, storing, processing, and analyzing big data. The main focus of the paper is on unstructured data analysis. Unstructured data refers to information that either does not have a pre-defined data model or does not fit well into relational tables. Unstructured data is the fastest growing type of data, some example could be imagery, sensors, telemetry, video, documents, log files, and email data files. There are several techniques to address this problem space of unstructured analytics. The techniques share common characteristics of scale-out, elasticity and high availability. MapReduce, in conjunction with the Hadoop Distributed File System (HDFS) and HBase database, as part of the Apache Hadoop project is a modern approach to analyze unstructured data. Hadoop clusters are an effective means of processing massive volumes of data, and can be improved with the right architectural approach. As enterprises adopt the Hadoop framework for unstructured data analytics, a key consideration is to integrate and interface with legacy data warehouse and relational database systems. This paper focuses on the unstructured aspect of big data, features of hadoop, advantage and disadvantage of hadoop. Also it discusses whether hadoop is replacement for data warehouse. This paper reviews non-relational big data approaches (NOSQL) such as distributed/shared-nothing architectures, horizontal scaling, key/value stores, and eventual consistency. This part of the paper differentiates between structured versus unstructured data. The paper describes various building blocks and techniques for Map Reduce and HDFS, HBase and their implementation in an open source Hadoop

2. BIG DATA TECHNOLOGIES

2.1. Hadoop

Hadoop [5] is a free, Java-based programming framework that supports the processing of large data sets in a distributed computing environment. It is part of the Apache project sponsored by the Apache Software Foundation. Hadoop provides a parallel storage and processing framework.it runs MapReduce[4] batch programs in parallel on thousands of nodes. Hadoop is a kind of MAD system [3] meaning that (i) it is capable of

10. **STABILITY OF MAGNETOHYDRODYNAMIC FLOW OF VISCOUS FLUID IN A ORIZONTAL CHANNEL OCCUPIED BY A POROUS MEDIUM**

P.M. BALAGONDAR1 , M. S. BASAVARAJ2 , RAGHAWENDRA MISHRA

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ORIGINAL PAPER

STABILITY OF MAGNETOHYDRODYNAMIC FLOW OF VISCOUS FLUID IN A HORIZONTAL CHANNEL OCCUPIED BY A POROUS MEDIUM

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Abstract. *A study is made of the influence of a coplanar magnetic field on the linear stability of a electrically conducting fluid flowing between two infinite parallel fixed plates in a porous media using the energy method. The sufficient condition for stability is obtained using the nature of growth rate, c, as well as sufficiently small values of the Reynolds number, R_e. From this condition we found that the strengthening or weakening of the stability criterion is dictated by the strength of the magnetic field and porous parameter. In particular, we found that the interaction of magnetic field with porous parameter is more effective in stabilizing the electrically conducting fluid in a porous medium compared to that of ordinary Newtonian viscous fluid.*

Keywords: *Linear Stability, porous media, Magnetohydrodynamic and growth rate.*

1. INTRODUCTION

The instability of a hydro magnetic shear flow, in which the additional influence of a magnetic field is taken into account, has received considerable attention owing, to its importance in a number of astrophysical contexts (see for example, Michael 1953, Hunt 1966). The effect of a magnetic field on the stability of laminar flows of an electrically conducting fluid has been found theoretically in a number of cases: it is known to be generally of a stabilizing nature, and this has confirmed qualitatively by experiment. In particular, they have shown that even in the nonlinear region the diffusive processes are very important throughout the fluid region. Using this assumption Stuart (1954), Velikhov (1959) and Tarasov (1960) examined the stability of plane poiseuille flow with a parallel magnetic field. Drazin (1960) has examined some general aspects of the stabilizing influence of a parallel magnetic field on a plane parallel flow, also considering only two-dimensional disturbances. Wooler (1961) has examined the stability of a plane parallel flow for small magnetic Reynolds number, when the magnetic field lies in the plane of the flow but is not parallel to it. He has also shown that three dimensional disturbances can be the most unstable.

Magnetohydrodynamic shear instability of a field aligned shear flow could be responsible for the generation and maintenance of turbulence. The situation is modeled locally

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11. THE EVOLUTION OF LINEARIZED PERTURBATIONS IN A MAGNETOHYDRODYNAMIC BOUNDARY LAYER

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59-istam-fm-fp-242

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THE STUDY OF DOUBLE DIFFUSIVE NATURAL CONVECTION IN ANISOTROPIC POROUS RECTANGULAR CHANNELS USING THERMAL NON-EQUILIBRIUM MODEL

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Abstarct: The effect of local thermal non-equilibrium on double diffusive convection in a rectangular channel filled with anisotropic porous media is considered, when the fluid and solid phases are not in local thermal equilibrium. Walls of the channels are non-uniformly heated to establish a linear temperature gradient and they are assumed to be impermeable and perfectly conducting. Darcy model with anisotropy permeability is used to describe the flow and a two field model is used for energy equation each representing fluid and solid phase separately. The critical Rayleigh number for the onset of convection using linear stability analysis obtained numerically as a function of mechanical anisotropy parameters, interphase heat transfer coefficient, solutal Rayleigh number, aspect ratio and results are investigated.

Key words: Rayleigh-Benard convection, anisotropy, Darcy model, thermal non–equilibrium model,critical Rayleigh number,Solutal Rayleigh number, Fourier series.

Introduction

The problem of double diffusive convection in porous media has considerable interest during the last few years because of its wide range of applications in various fields such as high quality crystal production, liquid gas storage, oceanography, production of pure medication, solidification of molten alloys and geothermally heated lakes and magmas etc. Double diffusive process can be important in other systems besides aqueous solutions and two applications arise in the context of storage and transport of liquid natural gas. The phenomenon of crystal growth has taken on a new practical importance with the increasing needs of the electronics industry for larger and more chemically homogeneous crystals. Crystal growth from a solutions or melt involves both heat and mass transfer and these usually lead to convection in the fluid, often double diffusive in character.Nilsen and Storesletton (1990) presented an analytical study of two dimensional natural convection in

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PIB: Profiling Influential Blogger in Online Social Networks, A Knowledge Driven Data Mining Approach

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Abstract

Online Social Networks (OSNs) facilitate to create and spread information easily and rapidly, influencing others to participate and propagandize. This work proposes a novel method of profiling Influential Blogger (IB) based on the activities performed on one's blog documents who influences various other bloggers in Social Blog Network (SBN). After constructing a social blogging site, a SBN is analyzed with appropriate parameters to get the Influential Blog Power (IBP) of each blogger in the network and demonstrate that profiling IB is adequate and accurate. The proposed Profiling Influential Blogger (PIB) Algorithm survival rate of IB is high and stable.

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Keywords: Blog document; Data mining; Influential blogger; Online social networks; Profiling; Social blog network.

1. Introduction

The web content, creation and usage has dramatically changed in the recent past with the evolution of Online Social Networks (OSNs). The rise of social media platforms such as Twitter, Google+, Facebook, Blog network etc., is generating a huge amount of data by the hour. Focus on user – generated content, activities and social network, has brought the scope for study and influence over OSNs. A social blog network is viewed as an OSN composed of nodes that represent blogs and links representing relations between blogs, e.g., myspace.com, blogger.com etc., allowing easy spread of information.

Blog growth is massive. Different types of information, opinions from different perspective is found on blogs by different bloggers on the same topic. Traditionally, people use to follow the words from different persons for taking any decision or to gather any information regarding an issue, which has been totally changed by blog networks. Here bloggers discuss their topic of interest, opinions or confusions openly, which are solved or answered by other bloggers. People with similar interest move closer by sharing their thoughts in their respective posts on blogs. This leads to people creating interesting contents and imposing on others by posting it publicly. Others who find it interesting, perform some actions on that blog, in-turn increasing the influence power of that blogger.

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