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# St. MARTIN'S Engineering College

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Department of **Mechanical, Civil Engineering, Humanities & Sciences and MBA** presents **Online International Conference on**

**"Recent Advances & Innovations in Technology, Management & Applied Sciences"**

on 19<sup>th</sup> & 20<sup>th</sup> March 2021



(ICRAITMS-21) **PROCEEDINGS**

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## Departments of Mechanical, Civil Engineering, Humanities & Sciences and MBA

Online International Conference on “Recent Advances & Innovations in  
Technology, Management & Applied Sciences” on 19<sup>th</sup> & 20<sup>th</sup> March 2021  
(ICRAITMS – 2021)

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**Sri. M. LAXMAN REDDY**  
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## MESSAGE

I am extremely pleased to know that the Departments of Mechanical, Civil Engineering, Humanities & Sciences and MBA of SMEC is organizing Online International Conference on “**Recent Advances & Innovations in Technology, Management & Applied Sciences**” on 19<sup>th</sup> and 20<sup>th</sup> of March 2021. I understand that the large number of researchers has submitted their research papers for presentation in the conference and also for publication. The response to this conference from all over India and Foreign countries is most encouraging. I am sure all the participants will be benefitted by their interaction with their fellow researchers and engineers which will help for their research work and subsequently to the society at large.

I wish the conference meets its objective and confident that it will be a grand success.

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**Sri. G. CHANDRA SEKHAR YADAV**  
EXECUTIVE DIRECTOR



## MESSAGE

I am pleased to state that the Departments of Mechanical, Civil Engineering, Humanities & Sciences and MBA of SMEC is organizing Online International Conference on “**Recent Advances & Innovations in Technology, Management & Applied Sciences**” on 19<sup>th</sup> and 20<sup>th</sup> of March 2021. For strengthening the “MAKE IN INDIA” concept many innovations need to be translated into workable product. Concept to commissioning is a long route. The academicians can play a major role in bringing out new products through innovations.

I am delighted to know that there are large number of researchers have submitted the papers on Interdisciplinary streams. I wish all the best to the participants of the conference additional insight to their subjects of interest.

I wish the organizers of the conference to have great success.

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**G. CHANDRA SEKHAR YADAV**  
Executive Director



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**Dr P. SANTOSH KUMAR PATRA**  
**PRINCIPAL**



I am delighted to be the Patron & Program Chair for the **Online International Conference** on “**Recent Advances & Innovations in Technology, Management & Applied Sciences**” organized by the Departments of Mechanical, Civil Engineering, Humanities & Sciences and MBA on 19<sup>th</sup> and 20<sup>th</sup> of March 2021. I have strong desire that the conference to unfold new domains of research among the Mechanical, Civil Engineering, Humanities & Sciences and MBA fraternity and will boost the knowledge level of many participating budding scholars throughout the world by opening a plethora of future developments in the field of Mechanical, Civil Engineering, Humanities & Sciences and MBA.

The Conference aims to bring different ideologies under one roof and provide opportunities to exchange ideas, to establish research relations and to find many more global partners for future collaboration. About 230 research papers have been submitted to this conference, this itself is a great achievement and I wish the conference a grand success.

I appreciate the faculties, coordinators and Department Heads of Mechanical, Civil Engineering, Humanities & Sciences and MBA for their continuous untiring contribution in making the conference a reality.

**(Dr.P. Santosh Kumar Patra)**  
**Principal**



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## CONVENERS

The world is always poised to move towards new and progressive engineering solutions that results in cleaner, safer and sustainable products for the use of mankind. India too is emerging as a big production center for world class quality. Mechanical, Civil Engineering, Humanities & Sciences and MBA play a vital role in this endeavor.

The aim of the online International Conference on “**Recent Advances & Innovation in Technology, Management & Applied Sciences**” being conducted by the Departments of Mechanical, Civil Engineering, Humanities & Sciences and MBA of SMEC, is to create a platform for academicians and researchers to exchange their innovative ideas and interact with researchers of the same field of interest. This will enable to accelerate the work to progress faster to achieve the individuals end goals, which will ultimately benefit the larger society of India.

We, the organizers of the conference are glad to note that 230 papers have been received for presentation during the online conference. After scrutiny by specialist 180 papers have been selected, and the authors have been informed to be there at the online platform for presentations. Steps have been to publish these papers with ISBN number in the Conference Proceedings and all the selected papers will be published in Scopus / UGC recognized reputed journals.

The editorial Committee and the organizers express their sincere to all authors who have shown interest and contributed their knowledge in the form of technical papers. We are delighted and happy to state that the conference is moving towards a grand success with the untiring effort of the faculties of Department Heads of Mechanical, Civil Engineering, Humanities & Sciences and MBA of SMEC and with the blessing of the Principal and Management of SMEC.

**Dr. D. V. Sreekanth**  
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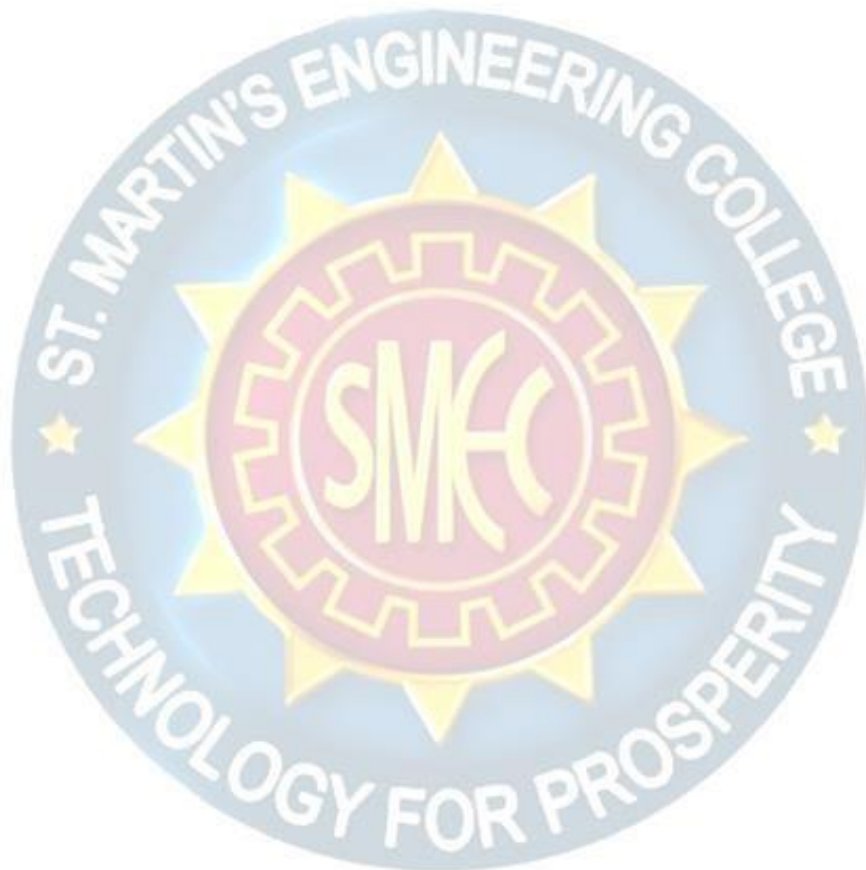
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Paper ID: ICRAITMS\_202012\_001

## **Study on Geotechnical, Engineering and Chemical Analysis of Amended Red soil as Landfill Liner Material**

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### **ABSTRACT**

In the present study, abundantly available problematic soil type of red soil was used as natural clay material and samples were taken from the kovilambakkam of Chennai district in Tamilnadu. In this study, Red Soil is the subject of an analysis from standpoint of assessing the basic properties of engineered landfill barrier. The main problem of landfill system is the intrusion of toxic contaminants from waste disposal which will affect the ground water sources and air quality. To meet the requirements good liner material, improvements of such soils are required. Stabilization method is adopted to improve the geotechnical and engineering properties of red soil with sodium bentonite as additive material. A series of laboratory experiments were conducted to analyze the changes in soil properties in terms of dispersion, hydraulic conductivity, consistency limits, sediment and chemical analysis with different proportion of red soil with 5% to 25% of Sodium bentonite mix. From the experiments, it is concluded that 90:10 proportion of red soil and bentonite mix satisfy the geotechnical and engineering property of liner material. Chemical Analysis is carried out for its extractable base (Ca, Mg, Na and K) and identifies the soil property using the criteria of Electrical Conductivity (EC), Cation Exchange Capacity (CEC), Sodium Absorption Ratio (SAR) and Exchangeable Sodium Percent (ESP).

**Key words:** Landfill liners, Dispersiveness, Atterberg Limits, Red soil, Permeability



Paper ID: ICRAITMS\_202012\_003

## **Triple-doped Ceria–Carbonate Nanocomposite Solid Electrolyte for advanced SOFC applications**

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### **ABSTRACT**

Triple-doped ceria  $\text{La}_{0.06}\text{Pr}_{0.06}\text{Sm}_{0.06}\text{Ce}_{0.82}\text{O}_{2-\delta}$  (LPS) and its carbonate nanocomposites  $\text{La}_{0.06}\text{Pr}_{0.06}\text{Sm}_{0.06}\text{Ce}_{0.82}\text{O}_{2-\delta} - (\text{Li-Na})_2\text{CO}_3$  (LPS–LN) were prepared through sol-gel auto-combustion route followed by solid state mixing methods. Entire powder samples were calcined at 600°C and sintered at 800°C for 4h. Prepared materials were characterized by powder X-ray diffraction (PXRD), Scanning electron microscopy (SEM), and Impedance spectroscopy studies. Confirmation of phase and existence of amorphous phase in nanocomposite was carried out using PXRD. Relative-density value of triple-doped ceria–carbonate nanocomposite was found to above 90% of their theoretical value. Surface morphologies i.e., microstructural analysis of both the samples were studied using SEM. Total ionic-conductivity analysis carried out from the impedance spectroscopy studies. In this study, triple-doped ceria–carbonate nanocomposite displayed the highest value of total ionic-conductivity over pure triple-doped ceria. Therefore, this triple-doped ceria–carbonate nanocomposite (LPS–LN) material can be use as solid electrolytes in advanced solid oxide fuel cell (SOFC) applications.

**Keywords:** *Triple-doped ceria, carbonate, nanocomposite, solid electrolyte, Advanced SOFC.*



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Paper ID: ICRAITMS\_202012\_006

## **Appraising the resident’s willingness towards IoT enactment in residential societies and satisfaction headed for used IoT services with reference to Pune city.**

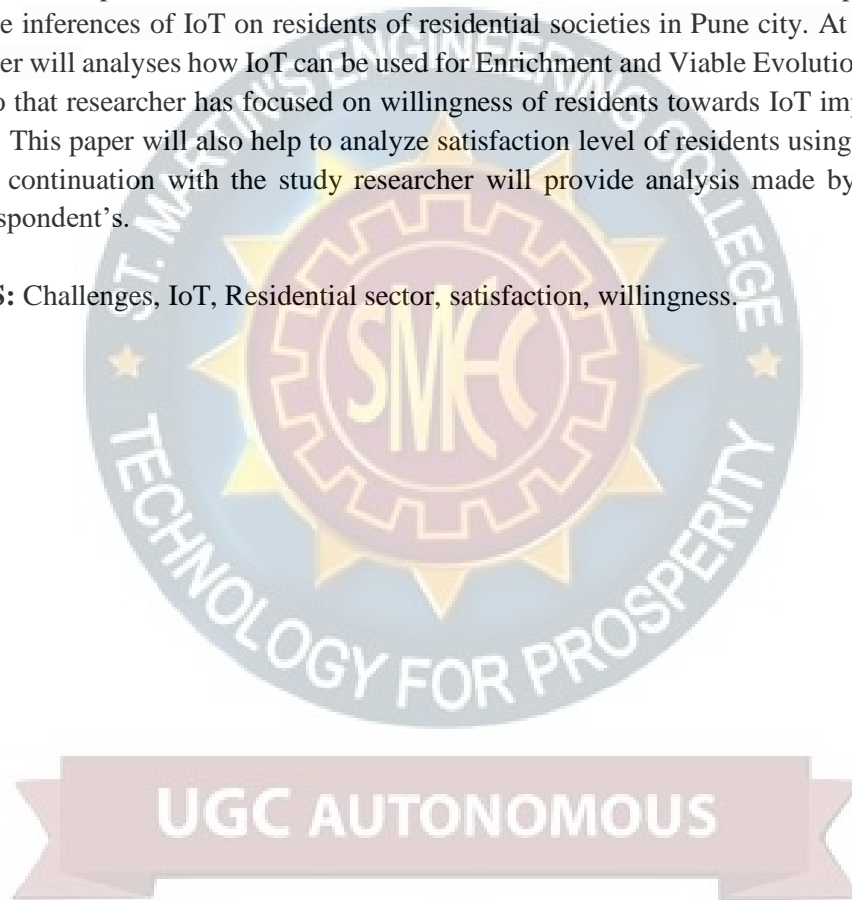
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### **ABSTRACT:**

The Internet of Things is going to acquaint with unbelievable opportunities in impending years. This paper is intended to explore the rise of the use of IoT for residential societies. In this paper researcher will investigate inferences of IoT on residents of residential societies in Pune city. At the start of this paper researcher will analyse how IoT can be used for Enrichment and Viable Evolution in Residential sector. Next to that researcher has focused on willingness of residents towards IoT implementation in their societies. This paper will also help to analyze satisfaction level of residents using IoT services in Pune City. In continuation with the study researcher will provide analysis made by data collected through the respondent’s.

**KEYWORDS:** Challenges, IoT, Residential sector, satisfaction, willingness.



Paper ID: ICRAITMS\_202012\_008

## **Diurnal and Seasonal Variations on Pc4 MHD wave with Kp indices at equatorial latitude and their dependence with Interplanetary Magnetic Field (IMF)**

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### **ABSTRACT**

Geomagnetic Pulsations noted on the earth are the mark of the unified signals from the earth's magnetosphere. Pc4 MHD (6.7 to 22 mHz) wave oscillation in the earth's magnetic field in the period range 45-150 seconds. The magnitude of these pulsations ranges from fraction of a nano Tesla (nT) to several nT. In this paper is initiated for describing Diurnal and Seasonal Variations on Pc4 MHD wave occurrence with Kp indices at equatorial latitude and their dependence with Interplanetary Magnetic Field (IMF) over the period range 01 January to 31 December, 2005 employing an array of three low latitude recording stations at Hanley, Nagpur and Pondicherry. Data analysis of complete year 2005 provided same patterns of Pc4 occurrence for Kp at all the three stations. Although Pc4 occurrence was reported for Kp values, yet the major Pc4 events occurred for range 5+ Kp 8+. The IMF dependence of Pc4 occurrence for the year 2005 has shown that even though at all the three stations, it extended for IMF magnitude of up to 22 nT, yet the majority of Pc4 events occurred for a narrower range of 2-10 nT. However it is important to note that at all the three stations, the peak in the occurrence of Pc4 events was observed for IMF range of 3 to 5 nT. The results suggest peak of occurrence for IMF range 3-5 nT.

**Keywords:** MHD waves, ultra-low frequency waves, magnetic micro-pulsations, interplanetary magnetic field



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Paper ID: ICRAITMS\_202012\_010

## **Feminine Sensibility in Pratibha Ray's Yajnaseni: The Story of Draupadi**

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### **ABSTRACT**

This paper throws light upon the most misunderstood character of The Mahabharata—Draupadi. Famous award-winning Oriya novelist, Pratibha Ray undertakes the bold task of documenting the unheard voices of Draupadi in her novel, Yajnaseni: The Story of Draupadi (1984). The current paper analyses the sacrifices of the protagonist while performing her duties towards her family and society. Her mental strength and endurance in dealing with the difficult circumstances of life, her attitude regarding patriarchy is also analyzed in the paper. Her post-marital sufferings, which were caused due to misunderstanding between her mother-in-law and her five husbands, the role played by her husbands in her life and the subsequent turn of events are also taken care of during the study. Another significant aspect is the socio-cultural significance of the character and society; Draupadi defines Indian women, and Mahabharata illustrates the culture of India. The author, with the aid of a mythological character, presented the status of women in Indian society. All these issues are studied, in-depth, in the paper.

**Keywords:** Agony; Consciousness; Patriarchy; Society; Suffering.



Paper ID: ICRAITMS\_202012\_011

## **The Role of Crowdfunding in Entrepreneurial Finance in India**

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### **ABSTRACT:**

This study seeks to examine the relatively new trend in alternative financing; namely, Crowdfunding and its role in funding start-ups and new enterprises. Crowdfunding is the financing of a project by a group of individuals (collectively, “the crowd”) instead of professional “accredited” entities or individuals such as banks, venture capitalists or business angels.

**Keywords:** finance, crowd funding, startup, entrepreneur



Paper ID: ICRAITMS\_202012\_013

## **INNOVATIVE METHODS AND TOOLS IN ENGLISH LANGUAGE TEACHING.**

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### **ABSTRACT:**

No doubt technology is an offshoot of science. Education has been revolutionized, so too the teaching methods have changed radically particularly, the English language teaching methods. Millennials are digital natives (people born with digital devices in their hands) and are easily stressed out with the abundance of information available on different websites which may likely to distract them. So, it is the responsibility of English teachers or instructors, to create a beautiful learning environment. To sustain interest in students and motivate them, digital platforms must be chosen wisely and effectively. Besides technical skills, communication skills, analytical skills, and writing skills also play a significant role in the holistic development of English language learners. This paper Explores how the process of English language learning in this digital era can be promoted with the ICT (Information and Communication Technologies). Teachers may feel that a special language learning tool is effective, however it is necessary to understand the advantages and the time it takes for students to learn to use the tools. Incorporating technology into teaching pedagogy simultaneously cultivate students their digital literacy skills along with the English language. So, it is the responsibility of instructors or teachers make the learning environment more congenial for learner’s development.

**Keywords:** Digital natives, innovative trends, English language learning, ICT (Information and Communication Technologies)



Paper ID: ICRAITMS\_202012\_016

## **WORK AND FAMILY LIFE BALANCE (WLB) AMONG WOMEN PUBLIC PROSECUTORS IN JUDICIARY SYSTEM OF MAHARASHTRA**

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### **ABSTRACT**

The legal profession has gained utmost importance and also it is one of the most adventurous as well as exhilarating career. In General the lawyers have high admiration in our society, and also there stay behinds the faith that when all else fails, one can still take remedy to the legal organism. In such a valued profession women could not absorb a valuable space. The main reason for less percentage of women in the legal system is work life imbalance. The work and family life imbalance leads to stress and overall dissatisfaction. Hence this research has under taken to find out the reasons which make work and family life imbalance and its impact on job involvement with reference to women public prosecutors with reference to Maharashtra. The researcher has adopted descriptive research design and a purposive sampling technique which comes under non-probability sampling method has employed and sample size is 156 women lawyers. Equally primary and secondary data are collected. The data are analyzed using SPSS. Finally it is showed that women advocates balance their work and family life at moderate level. Hence the study concludes by suggesting some measures to enhance the job involvement through effective work and family life balance.

**Keywords:** legal profession, work life balance, women public prosecutors and works-family conflict.



**UGC AUTONOMOUS**

Paper ID: ICRAITMS\_202012\_017

## **MILLETS AS NUTRACEUTICALS: A REVIEW**

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### **ABSTRACT**

The World Health Organization (WHO) recognizes that maintenance of optimum global public health requires not only the prevention of the early onset of chronic diseases but also the promotion of a healthier aging and ultimately prolongation of life. Going back to a well-recognized dogma of ancient Indian Siddha literature and Hippocrates ‘food is medicine and medicine is food,’ diet and dietary habits have been established to play important role for exalted health benefits based on different properties of foods. Millets are a group of highly variable small-seeded grasses, widely grown around the world. Millets are also rich sources of Carbohydrates, phytochemicals and micronutrients. Millets have nutraceutical properties in the form of antioxidants that prevent deterioration of human health such as lowering blood pressure, risk of heart disease, prevention of cancer and cardiovascular diseases, diabetes, decreasing tumor cases, etc. Other health benefits are increasing the time span of gastric emptying, provides roughage to gastro intestine. The objective of this review is to emphasize the importance of Millets in context of universal health and nutritional crisis. The role of biotechnological advancements for enrichment of its nutritional value and how these developments can commission to the field of nutritional biology by opening new avenues for future research.

**Keywords:** Nutraceuticals, Phytochemicals, Antioxidants, Micronutrients



Paper ID: ICRAITMS\_202012\_018

## **IMPLEMENTATION OF KNOWLEDGE BASED SYSTEM FOR PREDICTION OF VIRAL INFECTIOUS DISEASES OUTBREAKS**

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### **ABSTRACT**

The ample amount of data available all over the globe is in structured, semi structured and unstructured format; it may be in the forms like emails, full text documents, html files, web data, audio, video, etc. The paper intended towards the study of viral infectious diseases, its frequency, seasons and diseases outbreaks prediction. The paper aimed towards the analysis of outbreaks prediction through manually and through the proposed knowledge based system.

**Keywords:** Data Mining, Knowledge Based System, Viral Diseases, Outbreaks, Prediction



Paper ID: ICRAITMS\_202012\_019

## **INFLUENCE OF BORON IONS ON PHYSICAL AND OPTICAL PROPERTIES OF Gd<sup>3+</sup> IONS DOPED LITHIUM BORATE GLASSES**

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### **ABSTRACT**

Lithium borate glasses with content (100-x) (33.35Li<sub>2</sub>O -66.65B<sub>2</sub>O<sub>3</sub>)-xGd<sub>2</sub>O<sub>3</sub> (where x= 0, 0.5, 1, 1.5 and 2 mol%) have been prepared using melt quenching method. The density found to increase with Gd<sup>3+</sup> ions up to 1.5 mol% depicts the compactness of glass and then decreases with gadolinium content. Using bandgap energy, density and molar volume, the theoretical Gd<sup>3+</sup> ion concentration(N), refractive index(n), electronic polarizability( $\alpha_e$ ), reflection loss (R<sub>L</sub>), polaron radius(r<sub>p</sub>), field strength(F), inter-nuclear distance (r<sub>i</sub>), dielectric constant ( $\epsilon$ ), basicity ( $\Delta$ ) and metallization criterion(M) were calculated. Based on the above physical and optical properties, we can know how boron atoms are distributed in the glass matrix at the cost of gadolinium.

**Keywords:** UV-visible, Physical properties, Field strength, Metallic Borate



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Paper ID: ICRAITMS\_202012\_020

## **Growth, structural, theoretical, NLO and Anti-diabetic(AD) properties of Aquachlorido (2-[[6-(dimethylamino) pyrimidin-4-yl] sulfanyl] pyrimidine-4,6-diamine) copper(II) chloride hydrate (ADPSPDCCH) crystal**

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### **ABSTRACT**

A copper(II) complex of ADPSPDCCH is reported. Macro crystals were prepared by solution growth method and its assessment and utility were discussed. The prepared crystal was studied for single XRD investigation to categorize the unit cell consideration and morphology. The single crystal XRD study reveals the lattice parameters are  $a=11.4207\text{\AA}$ ,  $b=7.2392\text{\AA}$ ,  $c=21.6991\text{\AA}$  and  $\beta=103.15^\circ$ . The crystal system of the specimen as monoclinic with space group as  $P2_1/c$ . The entitled crystalline specimen is of  $0.30 \times 0.25 \times 0.16\text{ mm}^3$  of size. Characterization studies for macro and nano scaling such as SEM studies, theoretical studies, NLO studies and Anti-diabetic studies were properly performed with all sort of precautions and reported. From the present investigation of ADPSPDCCH, it is concluded that ADPSPDCCH crystals are most excellent for filter circuits, frequency doublers and nano level influx value which is applied for electronics and optics and bio tool for AD activity.

**Keywords:** crystal, NLO, XRD, SEM, theoretical, Anti-diabetic.



Paper ID: ICRAITMS\_202012\_021

## **Algorithmic structure for coupled field finite element analysis of switched reluctance motor using soft magnetic composite**

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### **ABSTRACT**

The applicability of Iron Powder material to switched reluctance machine has been thoroughly investigated through a coupled field numerical simulation approach which validates electromagnetic-thermal-structural fields for an accurate analysis of switched reluctance machine. Methods for the electromagnetic, thermal and structural simulations of (a) Switched Reluctance Machine made configuration of sheet Steel (M19-SRM) and (b) another configuration of Soft Magnetic Composite material (SMC-SRM) have been detailed along with coupling procedure. The two dimensional electromagnetic-thermal-structural coupled field analysis treats the joule heat loss as heat source in order to determine the nodal temperatures through thermal study and the same is applied as body force loads for stress analysis in various parts of the machine structure.

**Keywords:** Switched reluctance motor, Coupled field analysis, Soft magnetic composite, Finite element analysis, Torque ripple.



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_022

## **ADVANCE ANALYTICS IN CYBER SECURITY**

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### **ABSTRACT**

Cyber Security plays an important role in the field of Information Technology. Securing the information has become one of the biggest challenges in the present day. Various Governments and companies are taking many measures in order to prevent this cyber crimes .Whenever we think about the cyber security, the first thing that comes to our mind is cyber crimes which are increasing immensely day by day. The fast development of new cyber threats and information security issues which are utilized by cyber criminals. This paper mainly focuses on latest cyber security techniques, advances in cyber security and decision systems. It also focuses on latest about the cyber security techniques, challenges, Cyber Analytics and its key highlights.

**Keywords:** Cyber Security, Cyber crime, Cloud Technology, AI, Machine Learning.



**ABSTRACT** Proceedings of International Conference on “**Recent Advances & Innovations in Technology, Management & Applied Sciences**” (ICRAITMS-2021) Organized on 19<sup>th</sup> and 20<sup>th</sup> March 2021

Paper ID: ICRAITMS\_202012\_023

## **Renewable Energy in India**

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### **ABSTRACT**

Renewable energy contributes substantially to the total power generation capacity in India. The advertising and promotional effort by solar energy producers, dealers, and others is now negligible in terms of spend, outreach and impact. India depends to the extent of 70-80 percent on imported oil, and this naturally raises issues about energy security.

**Keywords:** Solar energy, Renewable energy, power generation



Departments of Mechanical, Civil, Humanities & Sciences and MBA of  
St Martin's Engineering College ([www.smec.ac.in](http://www.smec.ac.in))

**ISBN: 978-93-82829-41-6**

Paper ID: ICRAITMS\_202012\_026

## **A DETAILED STUDY ON A MATHEMATICAL MODEL OF THREE SPECIES ECOSYSTEM**

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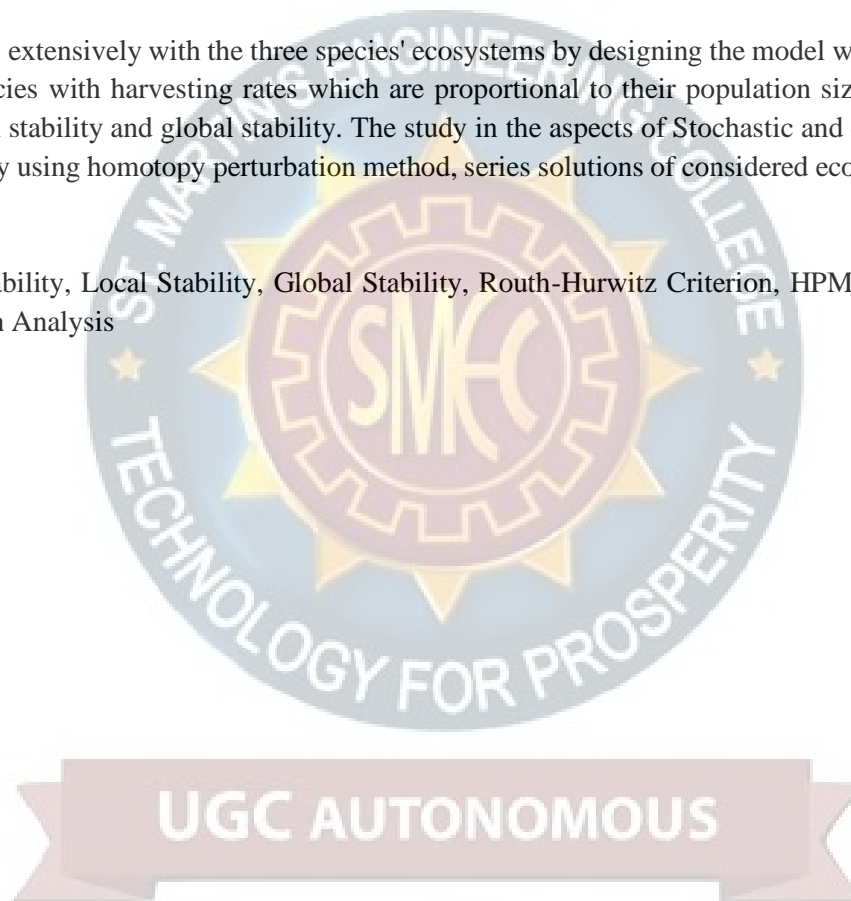
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### **ABSTRACT**

This paper deals extensively with the three species' ecosystems by designing the model with Prey, Predator and neutral species with harvesting rates which are proportional to their population sizes. It contains an analysis of local stability and global stability. The study in the aspects of Stochastic and diffusion analysis is carried out. By using homotopy perturbation method, series solutions of considered ecological model are derived.

**Key words:** Stability, Local Stability, Global Stability, Routh-Hurwitz Criterion, HPM, *Gaussian White Noise*, Diffusion Analysis



Paper ID: ICRAITMS\_202012\_028

## **Plastic pollution and need for research in field of Microplastics**

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### **ABSTRACT**

Plastic pollution is a threat largely ignored by humanity. Plastic pollution has become a way of life due to over consumption, inefficient resource utilization, throw away way culture, unabated & unplanned urbanization, lack of awareness and sensitization of consumers regarding waste scenario. Unscientific disposal methods, disposal in open environment like dumping plastic waste in aquatic systems, soil, lack of consumer awareness and stringent policy measures main factors leading to generation plastic waste. Microplastics owes its origin from fragmentation and degradation of plastics through physical and chemical forces of nature like ultraviolet radiation. Another source is deliberate production of microplastics for use in cosmetics and daily use personal care items. Microplastics has risen and occupied in every sphere of environment due to long shelf life of plastics, lack of proper screening of microplastics in waste water treatment and easy spread to soil, air and water by means of natural and anthropogenic channels. Recently microplastic pollution has gained momentum and interest due to its ubiquitous prevalence in environment samples be it soil, sediment, lakes, rivers, ocean or in organisms like sea food and most importantly humans. Microplastics poses a threat to environment as distribution, abundance and fate is largely unknown also various additives like pigments, heavy metals, phthalates, bisphenols are thought to be ingested along with microplastics. There is a need to establish safe toxicological limits for microplastics and study is needed to be conducted in studying ecological and ecotoxicological effects of microplastics. There is a urgent need to address this issue through proper legislation and research.

**Keywords:** plastic pollution, micro plastics, bisphenols, environment



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_029

## **Using the Process-Genre Approach to teach Academic Writing Skills to the Undergraduate Learners of Chapra, Bihar**

**Name: Dr.Manjeet Kumar Singh**

Designation: Assistant Professor,

Institution: Vardhaman College of Engineering,Hyderabad

### **ABSTRACT**

Writing is one of the four basic skills and the most demanding skills for the 21<sup>st</sup> century undergraduate learners. It is considered a core academic skill and the most complex skills to be mastered when compared to the other three skills-reading, listening and speaking (Krashen, 1984; Makalela, 2004; Nunan, 1990). Despite the complexity of writing skill, in most of the schools and colleges in the ESL context, it has been ignored or taught using the product-based approach to writing (Parina, 2011, p.188) and is not given the importance it deserves. Therefore, this situation is not very different in the state of Bihar where I conducted this study. Hence, this paper tries to analyze the strengths and weaknesses of the process- genre approaches to writing in terms of their view of writing and how it sees the development of writing. In the end, it tries to find how the process-genre approach may be effective to improve the academic writing skills of the UG learners of Chapra, Bihar.

**Key Words:** process-genre approach



Paper ID: ICRAITMS\_202012\_032

## **Impact of Artificial Intelligence (AI) in Business Decisions**

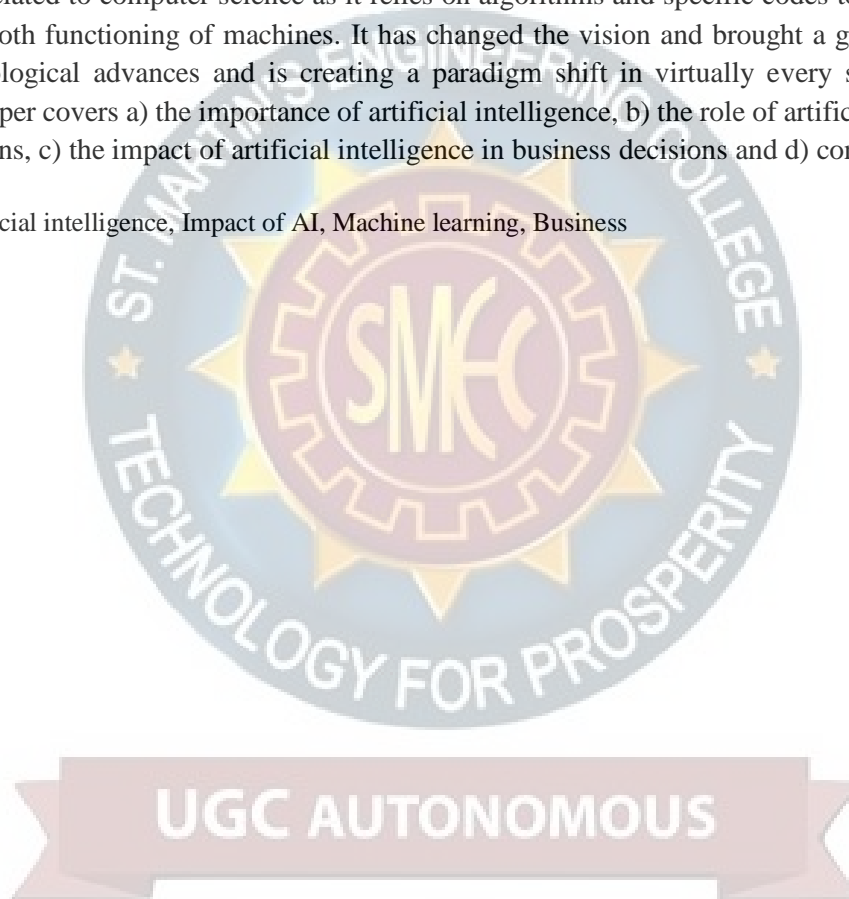
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**ABSTRACT:**

Artificial intelligence is one of the best growing technologies in today’s scenario. It is not only mounting in the field of machines but also is expanding its area in technology and corporate sectors. Artificial intelligence is related to computer science as it relies on algorithms and specific codes to run applications and for the smooth functioning of machines. It has changed the vision and brought a great revolution in terms of technological advances and is creating a paradigm shift in virtually every sector of the tech industry. The paper covers a) the importance of artificial intelligence, b) the role of artificial intelligence in business decisions, c) the impact of artificial intelligence in business decisions and d) conclusion.

**Keywords:** Artificial intelligence, Impact of AI, Machine learning, Business



Paper ID: ICRAITMS\_202012\_036

## **IMPACT OF LEADERSHIP STYLE ON ORGANIZATION STRESS**

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ST.MARTIN’S ENGINEERING COLLEGE, SECUNDERABAD-500100

### **ABSTRACT:**

This paper emphasized the impact of the Leadership Style on Organizational Stress. It considered the sample area in the Hyderabad region and considered the appropriate sampling methodology for the collection of primary data through the questionnaire. Dependent variable has Organizational stress and Independent variable has Leadership style. Bivariate correlated is used to identify the relationship between Organizational stress and Leadership Style of Principle and the result indicates that the Participatory Leadership Style is positive and strongly correlated with Organizational Stress. While, Authoritarian and Bureaucratic styles of leadership are observed to be moderately correlated with Organizational stress Structural Equation Models are applied in order to know the impact on the Organization stress and leadership style of principle and conclude that the principle of a participatory and task-oriented style of leadership has a low organizational stress and a high organizational stress on the Authoritarian and Bureaucratic principle.

**Keywords:** leadership, organizational stress, bureaucratic principle





Paper ID: ICRAITMS\_202012\_037

## **Experimental Study on COPPER SLAG As A Fine Aggregate Replacement**

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### **ABSTRACT:**

This project reports on compressive strength of concrete an experimental program to investigate the effect copper slag and polypropylene fibre. Copper slag is used as material for replacement of fine aggregate in concrete and polypropylene used an additive in the concrete. In this work, concrete grade M30 was used and IS method was used for mix design. The properties of material for cement, fine aggregates, coarse aggregates and copper slag were obtained by material testing and mix design. The compressive strength was studied for various replacements of fine aggregate by copper slag in proportions of 0%, 10%, 20%, 30%, 40%, 50%, 60% and 100%. The polypropylene fiber was varied from 0.1%, 0.2%, 0.3%, and 0.4% by weight of concrete. The test was carried out to obtain a characteristic strength of 30N/mm<sup>2</sup>. The compressive strength was obtained at 7 and 28 days. The maximum compressive strength of concrete was attained 40% replacement of fine aggregates at 7 and 28 days. When 0.2% of polypropylene was added maximum compressive strength was obtained.

**Keywords:** Copper Slag, Polypropylene Fibre, Compressive Strength



Paper ID: ICRAITMS\_202012\_038

## **Study on Drying Shrinkage of Copper Slag and Its Mechanism.**

**G. Siva Vignan<sup>1</sup>, <sup>2</sup>G. Sri Hari, <sup>3</sup> K. Abhinav Raj. <sup>4</sup>M. Mahinder**

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<sup>2</sup>UG Student, Department of Civil Engineering, St. Martin’s Engineering College, Hyderabad, India, 500100

### **ABSTRACT:**

This project reports on drying shrinkage of concrete an experimental program to investigate the effect copper slag and polypropylene fibre. Copper slag is used as material for replacement of fine aggregate in concrete and polypropylene used an additive in the concrete. In this work, concrete grade M30 was used and IS method was used for mix design. The properties of material for cement, fine aggregates, coarse aggregates and copper slag were obtained by material testing and mix design. The drying shrinkage was studied for various replacements of fine aggregate by copper slag in proportions of 0%, 10%, 20%, 30%, 40%, 50%, 60% and 100%. The polypropylene fiber was varied from 0.1%, 0.2%, 0.3%, and 0.4% by weight of concrete. The test was carried out to obtain a characteristic strength of 30N/mm<sup>2</sup>. Tests were performed for shrinkage which was determined at 7, 14 days and 28 days. As the age of concrete increased the shrinkage increased. Also with increase in copper slag content the drying shrinkage increased. The maximum compressive strength of concrete was attained 40% replacement of fine aggregates at 7 and 28 days. When 0.2% of polypropylene was added maximum compressive strength was obtained.

**Key words:** Polypropylene, Copper Slag, Shrinkage.



**UGC AUTONOMOUS**

Paper ID: ICRAITMS\_202012\_039

## **Performance of Bank Nifty during Pre and Post COVID**

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**Asst. Professor**

**St.Martin’s Engineering College, Secunderabad**

### **ABSTRACT**

The paper exposure to target on Nifty Bank, or Bank Nifty, is an index comprised of the most liquid and large capitalized Indian banking stocks. The period of the study from January-2020 to February-2021. It provides investors with a benchmark that captures the capital market performance of Indian bank stocks during Pre and Post COVID. The bank nifty is the combination of 12 stocks related to Banking sector. They are Axis Bank, Bandana Bank, Bank of Baroda, Federal Bank, HDFC Bank, ICICI Bank, IDFC Bank, INDUSIND Bank, Kotak Bank, PNB, RBL BANK, SBIN Bank.

**Key words-** Bank NIFTY, Stocks, Covid, Market performance



Paper ID: ICRAITMS\_202012\_040

## **ANALYSIS AND DESIGN OF G+5 RESIDENTIAL BUILDING AT GUNDLAPOCHAMPALLY VILLAGE, HYDERABAD**

**Dr.D.Naresh T. Madhu<sup>2</sup> E.Nagacharan reddy<sup>2</sup>,A.Rohith<sup>3</sup>,B.Ruchitha<sup>4</sup>**

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<sup>2</sup>Assistant professor, Sri Venkateshwara Univeristy/Department of Geology, Tirupathi, India

### **ABSTRACT:**

Hyderabad is one of the metro Politian cities in India with a population of of more than 10 lakhs. It is 5th largest city in India. As it is developing in every sectors the cost of leaving became more heavy. So construction in the city is also very costly. If the building constructed away from the well be cheaper than the one that is constructed in the city ignoring the pollution and leaving with peace. AutoCAD is one of the software’s used to design the functional design of any plan .in these project we made the design by following the building bye laws and codal provision IS 456:2000 , sp - 16 and sp-34 specifications. Our site is located in Gundlapochampally village, Medchal-malkajigiri dist, Hyderabad, Telangana. The site is located near the railway station and at a distance of two km from the main road. The total area of the site is 4032 sq.fts. The residential building consists of G+5.

**Keywords:** G+5, metro Politian cities, building



Paper ID: ICRAITMS\_202012\_041

## **DESIGN AND DEVELOPMENT OF SHEET METAL PHASE**

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### **ABSTRACT**

In a modernization country, there had been so many technologies being advanced one and any other. Day with the aid of day almost all of those technology and innovations being advanced for a better performance in view that there had been a few problems took place at some stage in their offerings. Therefore in product improvement there was an manifestly growing in making product for a complicated and higher first-class level that has to be executed mainly in product designing and producing a brand new technology in industry

For designing in engineering subject, there had been a extensively used of components manufactured from sheet metal. In sheet metallic forming strategies in production parts consisting of deep drawing, devoted equipment are wanted and this type of forming are exceptionally specialized, pricey and time eating in producing components. Therefore there's a new sheet steel forming strategies being brought, incremental forming rig take a look at, being delivered. It established totally on the usage of easy round tool that is moved along CNC controlled device direction.

**Keywords:** metal, innovation, forming



**UGC AUTONOMOUS**

Paper ID: ICRAITMS\_202012\_042

## **A DETAILED INVESTIGATION ON SRI RAM SAGAR DAM/RESERVOIR AND DISTRIBUTARY CANAL EFFICIENCY**

**DR. JNANA RANJAN KHUNTIA\***, **MOIZ UNJHAWALA\*\***, **K. SRUJAN GOUD\*\***, **S. MADHAN MOHAN REDDY\*\***,

\*Asst. Prof., Dept. of Civil Engineering, St. Martin’s Engineering College, Dhulapally, Secunderabad, India,

\*\*Student, Dept. of Civil Engineering, St. Martin’s Engineering College, Dhulapally, Secunderabad, India

### **ABSTRACT**

Water is a vital natural resource, a basic human need and a precious national asset. It is a key source for all activities right from agriculture to industry. In view of increasing water demand for various purposes namely irrigation, drinking, domestic, power (Thermal and Hydro), industrial and other uses, there is severe stress on water resources. Its scarcity is more pronounced with increasing population and needs. The performance of the existing irrigation systems (particularly, the major and medium irrigation schemes in the State) suffer from low water use efficiency, distribution losses, poor operational maintenance and management of soil salinity, water-logging and tail end problems. Canal system performance has been below its potential and significant problems need to be addressed to maintain its past contribution. The gap between the planned cropping intensity and area irrigated has widened and the economic returns to project investment has been disappointing. There is a weakness in most area of implementation and management. The water distribution is unreliable and often inequitable, maintenance is insufficient to sustain existing infrastructure. Keeping in view of the above scenario, the Central Water Commission, Ministry of Water Resources, Government of India, have initiated the study of water use efficiency of all the major and medium projects of India including Andhra Pradesh in a phased manner to enable to take necessary steps for improving the system. The study will focus on Dam/Reservoir efficiency, canal/conveyance efficiency, farm application efficiency, Drainage efficiency, Irrigation potential created and utilized, etc. The efficiency studies on 14 major and 6 medium Irrigation Projects of Andhra Pradesh have been taken up. Sri Ram Sagar Project in Nizamabad District is one of the above major irrigation projects for which water use efficiency studies are taken up.

**Keywords**— reservoir, distributary canal, dam/reservoir efficiency, canal/conveyance efficiency, farm application efficiency, drainage efficiency, irrigation potential

Paper ID: ICRAITMS\_202012\_045

## **EMPLOYEE ENGAGEMENT IN IT INDUSTRY OF HYDERABAD CITY**

**V Laxmi Prasanna**

St Martins Engineering College

### **ABSTRACT**

Employee Engagement is an idea increasing critical significance in the previous 10 years. Association today utilize connected with representatives as a device for vital accomplice in the business. The idea of employee engagement has now increased much more significance, since numerous drivers have been recognized, which impact employee engagement at workplace. As IT companies across Learning, Feedback, Leadership, Colleague Empowerment, Team Work, Line Management and Communication well-being of employees will be one of the significant angles that HR managers need to tend spotlight on. Hence, employee engagement is today seen as a powerful source of competitive advantage in the turbulent times. The examination investigates the idea of employee engagement and also throws light on key drivers of employee engagement by analyzing specifically seven drivers, namely Learning, Feedback, Leadership, Colleague Empowerment, Team Work, Line Management, and Communication. The available literature on drivers of employee engagement indicates that there is paucity of literature on these seven drivers and their impact on employee engagement. Thus, we focused on these seven specific and less researched drivers.

**Keywords:** Employee Engagement, IT Industry, Hyderabad city and Telangana



Paper ID: ICRAITMS\_202012\_049

## **HEART DISEASE PREDICTION SYSTEM WITH NEAREST CLINIC SUGGESTION.**

**CHITRA BHOLE<sup>1</sup>, MAYURESH PUJARI<sup>2</sup>, JAINAM JATAKIA<sup>3</sup>, ULKESH CHENDWANKAR<sup>4</sup>**

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### **ABSTRACT**

Heart disease is one of the most critical disease to cure in health care sector. People above age 50 and above have possibility of facing so many diseases that might be linked with heart. But some facts have claimed that recent lifestyle has made people in their adolescence also stand a chance of getting heart disease. Being said heart disease is critical disease also the data generated from patients are in terabytes, this data can be helpful in making radical decisions. We can gain good results by using various machine learning techniques. In this paper we will study about a Heart Disease Prediction Software (HDPS) which is developed using Hybrid Algorithm including Linear Logistic and KNN for analysing the presences of heart disease. The system uses 15 medical parameters such as age, blood pressure, sex, cholesterol, etc. for prediction. The HDPS will predict likelihood of patients having heart disease. The obtained results will be illustrating that the designed diagnostic system can effectively predict the heart disease. If the user is found out of having the disease then it suggests the nearest Cardiologist or Physician’s Clinic for Treatment using Google API.

**Keywords:** Logistic Regression, K-Nearest Neighbour, Google API





Paper ID: ICRAITMS\_202012\_051

## **CHARACTERIZATION OF COPPER COMPOSITE ALLOYS FOR HEAT TRANSFER APPLICATIONS**

**Ravinaik.Banoth<sup>1</sup>, D.V Sreekanth<sup>2</sup>**

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### **ABSTRACT:**

Aluminium nanoparticles were added to the Cu-Zn alloy in order to assess their effects on the microstructural, tribological and corrosion characteristics of preparation alloys. A mixture of zero volt percent copper and zinc powders and 5volt  $\alpha$ -Al nano-powder was used for the satellite ball mill alloying. The results showed that after 18 hours of mechanical alloy, the solid solution Cu-Zn had formed. The mechanically alloyed polvo was compacted and the obtained green compacts were fried at 750 ° C for 30 minutes. Nanoparticles were distributed uniformly in the Cu-Zn alloy matrix alumina. The tribology characteristics were evaluated through pin on disks, which showed that after introducing alumina nanoparticles the friction coefficient and wear rate were reduced to 20 percent and 40 percent. The corrosion properties of samples exposed to a NaCl solution of 3.5wt percent were investigated with immersion and potentiodynamic polarization methods.

**Keywords:** nanocomposites; copper zinc alloys; alumina; microstructure; corrosion; wear properties.



**UGC AUTONOMOUS**

Paper ID: ICRAITMS\_202012\_052

## **SOIL STABILIZATION USING WASTE FIBRE MATERIALS**

**P. Guruswamy Goud<sup>1</sup>, K.Teja Sri<sup>2</sup>, P.Praveen<sup>3</sup>, CH.Umakanth<sup>4</sup>, A.Sravan Kumar<sup>5</sup>**

1.Assistant Professor, Department of Civil Engineering, St. Martin’s Engineering College, Secunderabad  
2,3,4,5 JNTUH Student, Department of Civil Engineering, St. Martin’s Engineering College, Secunderabad.

### **ABSTRACT**

The main objective of this study is to investigate the use of waste fibre materials in geotechnical applications and to evaluate the effects of waste polypropylene fibres on shear strength of unsaturated soil by carrying out direct shear tests and unconfined compression tests on two different soil samples. The results obtained are compared for the two samples and inferences are drawn towards the usability and effectiveness of fibre reinforcement as a replacement for deep foundation or raft foundation, as a cost effective approach.

Structures that are constructed on the expansive soil may have occurred several damages due to its hill swell-shrinkage behaviour. So, these type of soil need to be stabilized in order to increase the shear strength of the soil, durability of the soil as well as to prevent from the erosion. Various case studies have been carried out for these types of soil to increase the soil properties. In this case study raw fibre known as polypropylene fibre have been used to increase the soil properties and interlocking of the soil and has become one of the major practices used in construction work.



Paper ID: ICRAITMS\_202012\_053

## **EVALUATION OF MECHANICAL PROPERTIES OF CONCRETE MADE BY USING DOLOMITE POWDER**

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### **ABSTRACT**

Cement act as a most important constituents of concrete as it acts as a binding material that binds all the constituents together to form a homogeneous mix. Almost in all the construction activities, cement is used. Natural resources are used in the manufacturing process of cement. To reduce the depletion of natural resources, various alternative materials possessing cementitious properties can be added as a replacement to the binding material and one such material is dolomite powder. In this experimental work, we are adding dolomite powder as a replacement to the cement. In this experimental investigation, we have chosen M40 grade concrete and prepared cubes and cylinders with varying percentages of dolomite powder such as 10%, 20%, and 30% respectively for evaluating its mechanical properties.

**Keywords:** Dolomite Powder, Mechanical Properties.



Paper ID: ICRAITMS\_202012\_054

## **A STUDY ON CUSTOMER AWARENESS ABOUT BANKING ADVANCEMENTS**

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### **ABSTRACT**

Indian banking sector is very important to make our economy stronger. Banking sector providing different financial services to all people. There are various services which have provided to customers under different types banks like commercial banks and co-operative banks with the aim of promote a diversified efficient and competitive financial system. There are lot of changes are occurs in banking services, as technology developed. The main technologies are Block chain, artificial intelligence, mobile banking, customer relationship management, cyber security. With the help of these changes banks provide different services based on needs of people with in short span of time. It is also very helps to forming cashless economy and increase capital formation and increase economic growth of the country.

E-banking is a modern concept of banking and it is an extended business opportunity of banks than regular banking. We all know every work in the bank branch done by employees is online on the internet but e-banking is a concept in which the bank gives online access to the customer of his account on the request of customers. E-banking is a worldwide entity that can operate anytime and anywhere on the internet.

**Keywords:** Banking Advancements, Online Banking



Paper ID: ICRAITMS\_202012\_056

## **Risk Assessment of MSME due to Covid-19: Business Continuity Plan**

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### **ABSTRACT**

MSME sector in India plays vital role. These sectors are more vulnerable due to Covid-19. These sectors facing various problems includes cash flow management, supply chain disruption, people management and absent of work force due to lock down restrictions, migration to their native places, absent due to fear and lack of motivation, absence of public transport. Risk management is essential to ascertain the level of risk exposure to their business in short run and long run. According to ILO comprehensive Risk assessment is necessary to identify the risks arising from People, Processes, Profit and Partners(4Ps). This paper highlights the importance of Risk Management, Risk Assessment Matrix and Risk Mitigation plan to reduce the risk and business continuity plan.

**Key Words:** Covid-19, Risk Management, Risk Assessment Matrix, Business Continuity.



Paper ID: ICRAITMS\_202012\_059

## **PROPERTIES COMPARISON OF PLASTIC OIL AND BUTANOL FOR BIO-DIESEL BLEND**

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### **ABSTRACT**

Demand for energy sources day by day increasing drastically; an era of using alternative energy sources becoming needy. Most positively all over the world usage of plenty of plastic, now it become unworthy, taking it in to account generating of waste plastic oil, sonicated to the ignition levels and blended it with diesel becomes a solution in both the ways. Even the idea of making it was good most hydrocarbons generated from plastic investigations needed to decrease emissions after blending with diesel, most researches worked on butanol as blend properties comparison with butanol also worthy in future investigations. Present work focuses on the preparation and properties evaluation of plastic oil and a comparative statement with butanol properties. Reviews and the possible ways discussed for better approach when the oil blend with diesel.

**Key words:** Plastic Oil, Butanol, Properties, Blends



Paper ID: ICRAITMS\_202012\_060

# **EXPERIMENTAL STUDY ON DURABILITY PROPERTIES OF CONCRETE BY USING QUARRY DUST AS PARTIAL REPLACEMENT OF CEMENT**

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## **ABSTRACT**

Quarry dust a waste from the stone crushing unit accounts 25% of the final product from stone crushing unit. This quarry dust which is released directly into environment can cause environmental pollution. To reduce the impact of the quarry dust on environment and human, this waste can be used to produce new products or can be used as admixture in concrete so that the natural resources are used efficiently and hence environmental waste can be reduced. Here quarry dust is used for partial replacement of cement in concrete for studying the strength property of concrete. The aim of the experiment is to find the maximum content of quarry dust partial replacement of cement in concrete. The percentages of quarry dust partial replacement of cement in concrete are 0, 10%, 15%, 20%, 25%, 30%, 35%, and 40%. M20, M30, M40 grade concrete cubes of 150x150x150mm size were cast for conducting compressive strength test. From the experimental studies 25% of partial replacement of cement with quarry dust improved hardened concrete properties.

**Keywords**— quarry dust, crushing, hardness, compressive strength, partial replacement

**UGC AUTONOMOUS**

Paper ID: ICRAITMS\_202012\_061

## **THE EFFECT OF CAPILLARY TUBE LENGTH ON THE PERFORMANCE OF VAPOUR COMPRESSION REFRIGERATION SYSTEM**

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### **ABSTRACT:**

The design of capillary tube plays a very important role in the performance of a vapour compression refrigeration system. Optimized design is possible through theoretical calculations, however may fail due to the reason that the uncertainties in the formulation of pressure drop inside the capillary tubes. Hence experimental investigations are the best in terms of optimization of certain design parameters.

Components of the vapour compression refrigeration system never work in isolation, change in performance of one component affect the performance of the other components and in turn overall performance of the system. Performance of the system also depends on the type, quantity of the refrigerant charged.

In the present work, an attempt is made to optimize Length of capillary tube for refrigeration unit of capacity 30lts, with R-134a as refrigerant and hermetic sealed compressor of capacity 0.14H.P.and this study examined the effects of lengths capillary tubes on the performance of a vapor compression refrigeration system. It is found that 4.5feet Length of capillary tube gave a better performance.Both inlet and outlet pressure and temperature of the test section (capillary tube) were measured and used to estimate the coefficient of performance (COP) of the system The parameters stated above can be further optimized in order to enhance the performance of the refrigeration system.



**UGC AUTONOMOUS**



Paper ID: ICRAITMS\_202012\_062

## **\* Stage Craft: An analysis of scenographic network in the thematic concerns in Mahesh Dattani’s plays**

**Rajeswari Bonam**

Department of Humanities and Science, St.Martin’s Engineering College

### **ABSTRACT:**

Mahesh Dattani is India’s first playwright in English to be awarded the Sahitya Akademi award for his contribution to world drama. His plays deal with religious tension, sexuality, and gender issues. What impresses one about the plays is the way he brings in the dynamics of personal and moral choices while focusing on human relationships. Theatre director Alyque Padamsee calls him one of the “most serious of contemporary play wrights”.

### **Place of Dattani in Indian Drama:**

Very recently Indian English drama has shot into prominence. The thirty-eight year old Bangalore based Dattani has come up with forceful plays like “Where There is a Will”, “Final Solutions”, “Dance Like a Man” and so on. Dattani’s plays are written for the stage. As poetry is meant to be read in order to be enjoyed, the plays are meant to be staged. It is the visual quality and dramatic effect which are of paramount importance. Dattani accordingly adapts his material to the space, reshaping and fine-tuning his texts constantly.

Dattani’s plays speak across linguistic and cultural barriers. His plays have a universal appeal. They can be staged anywhere in the world, they would draw full attention of the audience. It may however be noted that his plays are essentially rooted in the Indian settings. More than he is able to merge the past and the present as well as geographical locations. It is in the fitness of things that we must take an attempt at evaluating the playwright’s thematic concerns as well as his exploration of, and experimentation with stage.



**UGC AUTONOMOUS**

Paper ID: ICRAITMS\_202012\_063

## **Challenges and Opportunities for Implementation of IIOT in SME sector in India**

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### **ABSTRACT**

Industrial Internet of Things is the sub set of IOT and Industry 4. This new technology already started worldwide and India has no exception to catch up this technology due to various benefits associated with the implementation. A wide scope is there for implementing this technology to increase their productivity, improve manufacturing competitiveness particularly for Small and Medium Enterprises (SME). The Government of India already initiated implementation of 5G Networks in India and possible to increase internet speed and portability of data in mobile devices, real time monitoring of the machines and production in near future. This paper highlights the adoption of IIOT technology in SME platform in India and whether Indian SMEs are ready to adopt this technology is discussed.

**Keywords:** IIOT, Industry 4.0, 5G Network, Small and Medium Enterprises.



Paper ID: ICRAITMS\_202012\_065

## **Authentic Texts as Pedagogic Tools in English Language Classroom**

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**ABSTRACT:**

The paper argues the use of authentic texts/ materials in language teaching and learning keeping in view of the learners who are from rural background and socially disadvantaged sections of the society. It also discusses the benefits of exploiting these materials in ESL classroom in general and the advantages of using newspapers in particular.

**Keywords:** Authentic Texts, Newspapers, Exposure, English as Second Language.



Paper ID: ICRAITMS\_202012\_066

## **SOLAR ONION DRYER**

**SUNIL LAMANI**

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### **ABSTRACT**

In this experiment by using natural convection method and with help of solar energy onion are dried. An attempt has been made to design and fabrication solar onion drier which is not required electricity. The study is made by taking the harvested onion. A comparative study is done between convectional drying and drying with solar onion drier. The temperature, moisture and for particular place experiment is done.

Key words: solar heater, Drying chamber, Temperature, and Density.



Paper ID: ICRAITMS\_202012\_069

## **MODELLING AND MOTION ANALYSIS OF SINGLE ARM ROBOT**

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<sup>3</sup> Associate Professor in Mech.Dept., St.Martin’s Engineering College, Dhulapally, Secenderabad, Telangana

### **ABSTRACT**

Industrial robots are the most manufactured and used types of robots in the production industry at these days to minimize the labor cost. Many industries must have the benefit of using them for their batch production. In order to enhance its performance improvement of design of industrial robots is required, which will direct the further enhancement in the robotics industry. Therefore, there is an effort to give the concept of optimum design of robot by considering the different the design parameters which makes it more efficient and reliable to use in the manufacturing industry.

Nowadays, for optimization the modeling and simulation tools are the widely used to facilitate and accelerate the design process such as dynamic simulation, structural analysis, optimization frame work.

In this project we are going to design the model of ABB SINGLE ARM ROBOT. By using the 3D CAD modelling tool that is CATIA V5 R20. After completion of part modelling and assembly we will do the kinematic analysis in CATIA. By this analysis we will constrain degrees of freedom of robot. After this process we will do static structural analysis on main bar by using ANSYS. Then we will conclude whether our design is safe or not. Hence this gives a concept to get an optimum arm design to increase production rate.



**UGC AUTONOMOUS**

Paper ID: ICRAITMS\_202012\_070

## **A peer Comparison of corporate ESG and Financial Performance in the Indian Context**

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### **ABSTRACT**

This report, inspired by the November 2017 launch of the S&P BSE 100 ESG Index, explores the effect of superior corporate ESG performance on the financial performance of Indian companies, as measured by their inclusion in the new ESG index, in an attempt to fill in the gap in research on the subject in the Indian context. The research employs cross-sectional linear regression analysis, and the findings show that strong ESG performance contributes to strong financial performance, as calculated by market-based (Tobin's Q and Price-earning ratio) and accounting-based metrics (ROA and ROE). The findings, however, are not important in terms of ROE. The results suggest that leading ESG based businesses would gain a competitive edge and increase their bottom line. The findings have significant consequences for businesses, investors, administrators, and government and regulatory agencies.

**Keywords:** ESG, Corporate sustainability, Corporate social responsibility, Financial performance, Peer comparison



Paper ID: ICRAITMS\_202012\_073

## **Vetiveria zizanioides As A Natural Coagulant For Treating Wastewater**

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<sup>1-4</sup>Department of Civil Engineering, St. Martin’s Engineering College, Dhulapally, Secunderabad

### **ABSTRACT:**

Turbidity can be removed with the support of natural coagulants which are derived from different plantparts. The natural coagulants may be utilized in treatment of wastewater that is in coagulation-flocculation method. These natural materials are generally named as bio-adsorbents which can remove turbidity from any sort of water / wastewater sample. Turbidity is always problematic parameter in wastewater treatment. Turbidity in reality refers to the cloudiness or muddiness of a solution. It points out the existence of total suspended solids (viz., clay, silt, organic matter) which are very harmful for mankind, biologically as well as chemically. The intentions of this study were to use natural coagulant available in the vicinity (i.e., Vetiveria zizanioides) as a substitute to the chemical coagulants. In this project two types of samples are collected i.e., domestic wastewater and agriculture wastewater. Impact of variables like pH, adsorbent dose and contact time were determined. Experimental results indicate that, Vetiver root powder shows good bio-adsorbent character. It is one of the medicinal plant root which has the capacity to remove or reduce turbidity and used as a natural adsorbent. These natural adsorbents can be effectively used for reducing turbidity without giving any chemical treatment. The highest turbidity removal efficiency of Vetiveria zizanioides for domestic wastewater and agriculture wastewater respectively were 91% and 89%. Both isotherm models i.e., Langmuir and Freundlich were used to express the performance of adsorption. The experimental values appropriately suited Freundlich than Langmuir isotherm model.

**Keywords:** Isotherm models, Natural coagulant, Turbidity, Vetiveria zizanioides and Wastewater.



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_075

## **L2 Acquisition: Learner Motivational Strategies**

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### **ABSTRACT:**

Educating and harnessing learners’ knowledge and correlating it with teaching strategies grips the attention of the young students in a class. The significance of English as a second language (L2) is widely known and thus, it becomes evident to come up with more and more innovative strategies that would cater to the needs of the learners and would aid them with rich vocabulary, language fluency and apt pronunciation. The paper encompasses a) Krashen’s theory of Second Language Acquisition, and Howard Gardener’s Multiple Intelligence theory, b) motivational strategies for L2 acquisition, c) factors hampering second language learning, d) integrating knowledge, skills and attitudes of a learner and e) conclusion. Moreover, the paper underscores diverse motivational strategies used in a language classroom at tertiary (B.Tech) level and discusses of the implementation, analysis, effects and learning outcomes of these strategies, the ratio of teacher-learner involvement and step by step the progress shown by the learners after the implementation of motivational strategies into the classrooms. The paper is a blend of theories, activities, approaches and learner motivational strategies that would open new horizons of learning and a plethora of opportunities available to them.

**Keywords:** L2 acquisition theories, Learner motivational strategies and its analysis, classroom investigation.





Paper ID: ICRAITMS\_202012\_076

# **FABRICATION OF AUTOMATED FLOOR CLEANER SAMPLE**

**K HEMA LATHA**

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## **ABSTRACT**

In this fast-paced world, one hardly finds time to do the basic necessities of life. Due to which households and industries of today are getting more efficient, convenient and smarter. The main objective of this project is to design and implement an automated floor cleaner which reduces human effort and saves human time. In previous years flooring of households and offices are cleaned using vacuum cleaners etc, which requires human effort. The robot shines in this area. It is fully automatic ie. Can detect obstacles and has a capability to maneuver by itself. Automatic floor cleaner is a compact robotics system which provides floor cleaning service in room and big offices reducing human labor. Basically as a robot it eliminates human error and provide cleaning activity with much more efficiency. If we clean the floor manually then there is a possibility that the operator will leave some portion of the floor. Also due to manual labor involved this is time consuming and irritating to clean the floor. Also in big offices floor area is very huge and the people involved there for cleaning purpose cannot clean it much more efficiently. This is where the robot comes as an advantage. Also the robot is small and compact in size.



Paper ID: ICRAITMS\_202012\_079

## **The Hardship of Training English Language: The Collaboration in the midst of Research and Training**

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### **ABSTRACT**

Researchers have conducted a large number of studies to solve problems and help teachers to overcome their difficulties. They have also tried to find the relationship between the result of research and their teaching. Learning English as a second or foreign language has received a lot of attention, so teachers have to find some well-planned and organized ways to facilitate the process of learning and teaching. This paper is a brief review on teaching English as a foreign language and why learners are interested in learning English. It also discusses why teachers have difficulties with teaching English language, and what they should do to facilitate the teaching process. It shows the relationship between language pedagogy and research as well as research and teaching. It also deals with a set of strategies and methods that teachers can apply as instruments to improve their students’ learning English.

**Keywords:** Teaching English, Second language acquisition, Methods and strategies



Paper ID: ICRAITMS\_202012\_080

## **Performance Enhancement in Domestic Refrigeration System**

**<sup>1</sup>R.Hanuma Naik, <sup>2</sup>B Taraji Naik, <sup>3</sup>S.Amith Kumar**

<sup>1, 2, 3</sup> Assistant Professor in Department of Mechanical Engineering  
St.Martin’s Engineering College-Secunderabad-500100

### **ABSTRACT:-**

This work presents the improvement interaction of Refrigerator test ring and afterward completes the presentation investigation of homegrown fridge, it is one of the home machine using mechanical fume pressure cycle in it measure. Execution of the framework becomes primary issue and numerous explores are as yet progressing to assess and improve effectiveness of the framework. Execution of cooler likewise relies upon delta and outlet state of every segment. So in this exploration work fridge test ring will be created and get execution of homegrown cooler in term of Refrigeration Capacity, Compressor Work and Coefficient of Performance (COP) by deciding two significant boundary during working condition which are temperature and pressing factor.

**Keywords:** Compressor, Condenser, Expansion Valve, Evaporator



Paper ID: ICRAITMS\_202012\_081

## **Non-Destruction Evaluation of Material Defects by Laser Based Ultra Sonic's**

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### **ABSTRACT:**

Non-contact generation and detection of ultrasound waveforms is of practical importance, since it permits making ultrasonic measurements at elevated temperatures, in corrosive and other hostile environments. The use of ultrasonic sensors to detect flaws in aluminium specimens and the advantage of Lamb wave for their characterization has been proved. Lamb waves are bounded by the plate surface causing a wave guide effect. In this experimental study a 2mm thick aluminium plate was chosen with different induced defects. Ultrasonic lamb waves were generated by an EMAT and PZT transducers and received by an optical He-Ne laser system. A frequency of 200 KHz was used to generate ultrasonic lamb waves to propagate within the material without attenuation. Laser-based configuration was used to quickly locate the defect. Guided Lamb waves allow inspection of the complete thickness with only one scan, permitting to detect and to size both internal and surface defects. Moreover B-scan configuration was used to inspect single-side access structures which reduce the inspection time. Velocity dispersion was plotted using dispersion software and the experimental results were in good agreement with the dispersion curve.

**Keywords:** PZT Transducer, He-Ne Laser; Lamb waves; Laser generation; Non-contact ultrasonic inspection



Paper ID: ICRAITMS\_202012\_082

## **ANALYSIS AND DESIGN OF [G+11 ] MULTI-STOREYED RESIDENTIAL BUILDING BY USING STAAD PRO.**

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<sup>2,3,4,5</sup>Students, Department of Civil Engineering, St. Martin’s Engineering College, Secundrabad-500100, Telangana state, India.

### **ABSTRACT**

Reinforced concrete frame buildings are the most common type of construction in urban India, which are subjected to several types of forces due to earthquake. The main objective of earthquake engineering is to design and building a structure in such a way that the damage to the structure and its structural component during an earthquake is minimized. Frequency of occurrence of earthquake has increased recently causing severe damage to human life and property. Hence need of accurate seismic analysis of structural arises. The principle objective of this project is to analyze and design a multi- storeyed building [Stilt+G+11] using STAAD.Pro. The design involves load calculations manually and analyzing the whole structure by *STAAD* Pro. The design methods used in *STAAD*.Pro analysis are Limit State Design conforming to Indian Standard Code of Practice. *STAAD*.Pro features a state-of- the-art user interface, visualization tools, powerful analysis and design engines with advanced finite element and dynamic analysis capabilities. *STAAD*.Pro has a very interactive user interface which allows the users to draw the frame and input the load values and dimensions. Then according to the specified criteria assigned it analyses the structure and designs the members with reinforcement details for RCC frames. We continued with our work with some more multi-storied frames under various load combinations. Our final work was the proper analysis and design of a [ G + 11] RCC frame under various load combinations

**Keywords:** *STAAD*.Pro, Multi-storey building, Concrete mix, Steel strength, Limit state method



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_083

## **Graph-Based Algorithm for Word Sense Disambiguation: A Performance and Comparison**

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\* Department of Computer Science and Application, RCPET's IMRD, Shirpur, India.

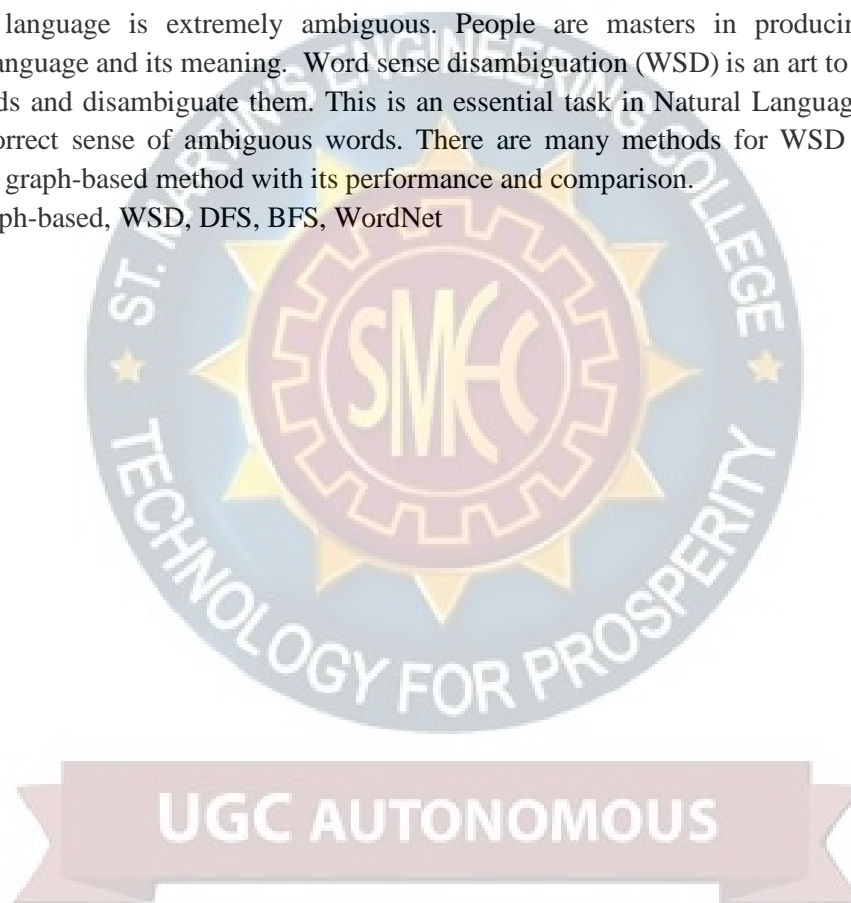
\*\* School of Computer Sciences, KBC North Maharashtra University, Jalgaon, India.

\*\*\* Centre for Development of Advanced Computing (C-DAC), Pune, India.

### **ABSTRACT**

Human verbal language is extremely ambiguous. People are masters in producing language and understanding language and its meaning. Word sense disambiguation (WSD) is an art to find the senses of ambiguous words and disambiguate them. This is an essential task in Natural Language Processing that detecting the correct sense of ambiguous words. There are many methods for WSD in this paper we elaborate on the graph-based method with its performance and comparison.

**Keywords:** Graph-based, WSD, DFS, BFS, WordNet



Paper ID: ICRAITMS\_202012\_085

## **Organizational Culture and Its Impact on the Job Satisfaction in Education Sector at Hyderabad**

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### **ABSTRACT**

In developing countries such as India, education levels are very low relative to education standards in developed countries. One of the fundamental reasons for this may be the lack of a supportive organizational culture in the education field. Supportive corporate culture can increase teachers' level of job satisfaction, and happy teachers can generate sound knowledge, happiness, and innovation. This study aims to ascertain the impact of organizational culture on the level of job satisfaction of public and private sector teachers, higher education institutes and universities in Hyderabad, India's largest city and higher education center. Data may be obtained via a standardized questionnaire from a group of 347 teachers. To evaluate the constant, primary component analysis is used. Empirical studies suggest that organizational culture is split into two components: management and leadership corporate culture (OCM) and employee-related corporate culture (OCE). The effect of both forms of culture on work satisfaction is optimistic and essential in this research. Nevertheless, we remember that OCE's influence on work satisfaction is more excellent than OCM's impact.

**Keywords:** Organizational Culture; Job Satisfaction; Education Institutes; Hyderabad.



Paper ID: ICRAITMS\_202012\_086

## **Design of Energy Recovery Model by Braking System**

**Venkat Harish S<sup>1</sup>, Balaji D Tandle<sup>2</sup>, Sreenraju.M<sup>3</sup>**

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### **ABSTRACT**

Power is wasted because of rubbing action between the objects in occurrence of due to brake. If some amount of power is restored and it will reutilized means, it benefits in refining fuel expensive of a automobile or any device that consumes petrol energy, changing from land operated vehicles to in air flying planes. It’s a mechanism of recovering the energy during the brake. Kinetic Energy Recovery System (KERS) is one of the type of recovering energy during brake. For the fabricated the model we are selected readily available parts such as motor, battery, power circuit and dynamo. And the remaining frame structure, steering arrangements, seating arrangement is done by standard calculation and for joining process we used welding technology. The recovery of energy takes place while applying the brakes at that time some amount of energy is recovered from the rotating wheels and by using the dynamo the rotational motion is converts into electrical form.

**Keywords**— KERS, Braking, Motor, Dynamo, Led Bulb





Paper ID: ICRAITMS\_202012\_087

## **Design and Analysis of Alloy Wheel**

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Assistant Professor, Dept of Mechanical Engineering, Sri Indu Institute of Engineering and Technology, Hyderabad, Telangana, India.

### **ABSTRACT**

Three new car wheel Rims are drawn using the design software Solidworks2018 and various forces are theoretically calculated and applied on the model and analyzed through Ansys (19.0) software with 4 alloy materials. Initially the static analysis is done by giving the corresponding Engineering Data that consists of mechanical properties of the materials and the properties-Density, Ultimate Tensile Strength, and Poisson's Ratio are added. The Von Misses stresses, total deformation, and equivalent elastic strains are determined for the supports and loads that are applied on the rim models. Supports include the fixed supports at the rim center and cylindrical supports where the nut and bolts are fixed. A force is applied on the rim horizontally from theoretical calculations. The deformations and stresses are determined and all the analysis is done by taking all the 3 different models and rim materials (AlSi7Mg0.3, ZK60A, MgY20, Ti-6Al-4V) are applied on the rims to know the best design and best material for a particular type of loading. From the conclusions of above analysis we came to know that Aluminum Alloy has the best results of Rim1 and Rim1 is the best design. The Rim1 and Rim3 of Titanium and Aluminum alloy has the best results in all kinds of solutions. The Alloys of Aluminum and Magnesium also gave good results with respect to the design to which the materials are applied. Titanium alloy has the advantages and increases the life of the rims but economically it is costlier than other alloys.



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_089

# **PLASTIC CONVERSION & THERMO-STRUCTURAL ANALYSIS OF TWO WHEELER CARBURETOR USING CAD/CAE**

**P. NEIL MOSES**

Department of Mechanical Engineering, St Martin Engineering College, Hyderabad, India.

## **ABSTRACT**

One of the most important component in Fuel feed system of Spark ignition engines is Carburettor. It is placed between the fuel filter and induction manifold. It provides sufficient air-fuel ratio of varying proportions to compliment engine operating conditions. Carburettor’s function is based on two laws, they are Vacuum and Venturi Effect.

The main objective behind undertaking the project “Plastic conversion and Thermo-structural analysis of two wheeler carburettor using CAD/CAE” is to study and evaluate the performance of carburettor under different operating conditions. The system is related to the plastic conversion of carburettor using CAD/CAE and RPT Technologies and evaluate the performance of carburetor under different operating conditions. The component is designed in a 3D cad tool CREO, imported and analysed in ANSYS for determining the Temperature distribution, Stress distribution, Von misses Stress and Strain in ANSYS, the material used in this process is polyamide. ANSYS is a flexible and cost effective tool. ANSYS is used in industries in order to solve several mechanical problems. An attempt is made to suggest the best combination of plastic material, which yields a low temperature variation around the inlet manifold and minimum von misses stress possible.

**Keywords:** Carburettor, Plastic conversion, Stress distribution, Temperature Distribution

**UGC AUTONOMOUS**

Paper ID: ICRAITMS\_202012\_092

# **FINITE ELEMENT ANALYSIS OF THE CLASSIC BICYCLE FRAME**

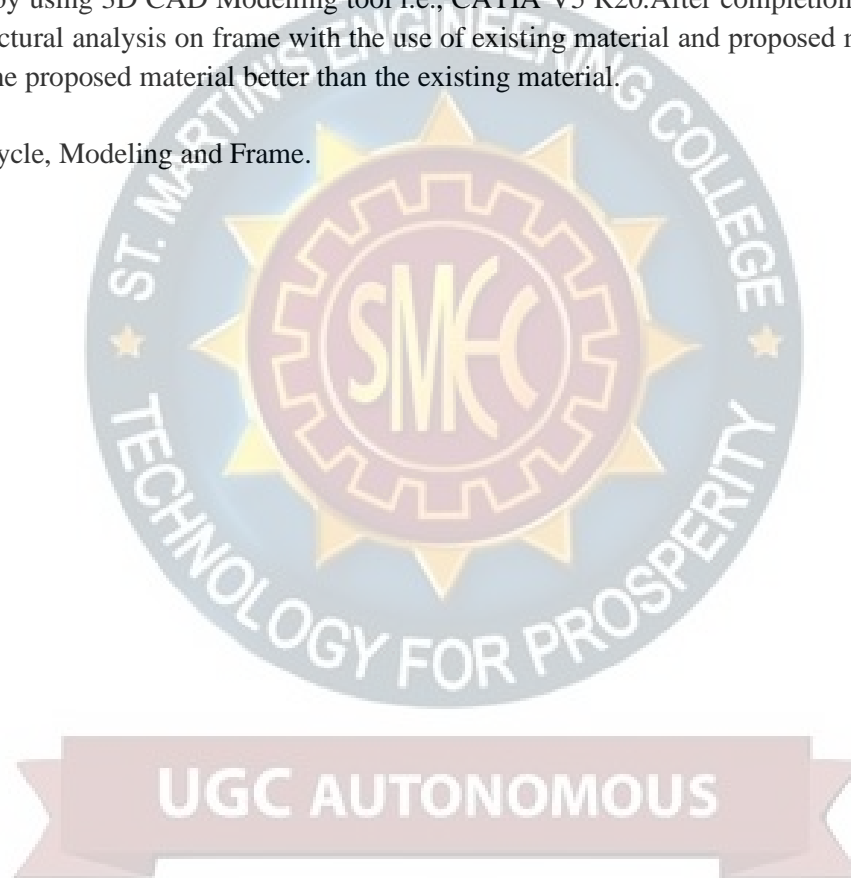
**DILEEP PANCHAL**

Department of Mechanical Engineering, St.Martin’s Engineering college Dullapally ,Secunderabad

## **ABSTRACT**

Analysis of Bicycle Frame by using 3D CAD MODELLING TOOL In this project we are going to design Bicycle Frame by using 3D CAD Modelling tool i.e., CATIA V5 R20. After completion of design we are going to do structural analysis on frame with the use of existing material and proposed material and we’ll conclude why the proposed material better than the existing material.

**Keywords:** Bicycle, Modeling and Frame.



Paper ID: ICRAITMS\_202012\_094

## **HISTORY OF SILICA AEROGEL NANOPARTICLE**

**Bhukya Balu<sup>1</sup>, Aavula Ranjith<sup>2</sup>, Chithanuri Nagaraju<sup>3</sup>, N. Sneha<sup>4</sup>**

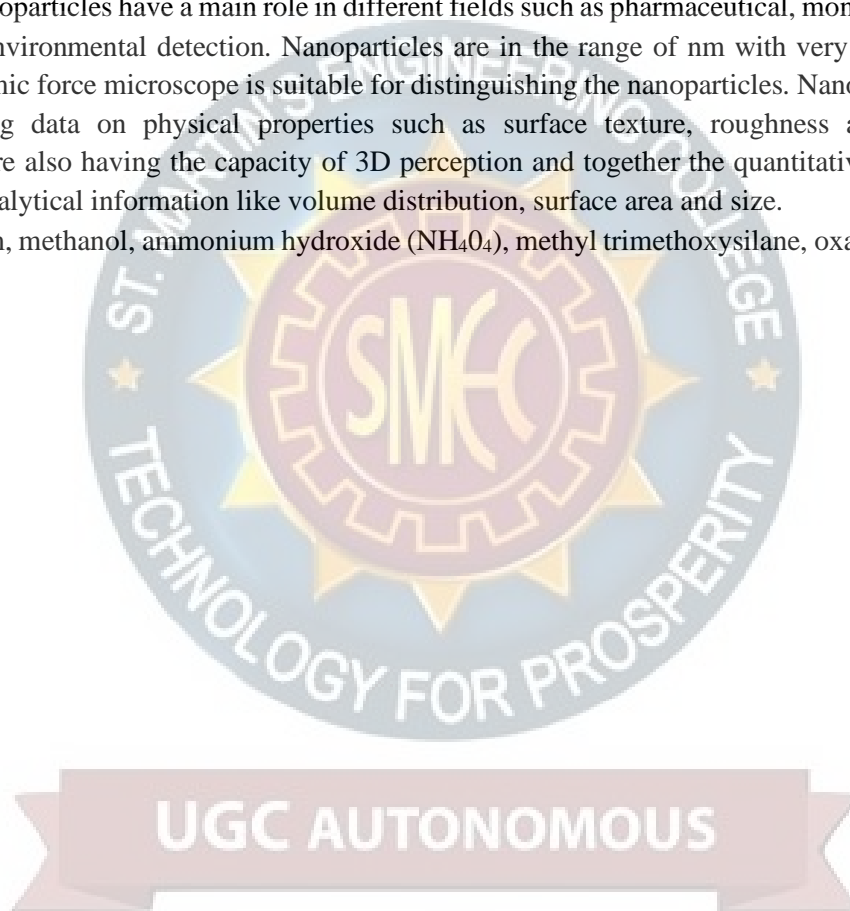
<sup>1</sup> Research Scholar, University College of engineering, Osmania University

<sup>2,3,4</sup> Assistant Professor, Department of Mechanical Engineering, St. Martin’s Engineering College, secunderabad, pin: 500100, Telangana, India.

### **ABSTRACT**

Now-a-days nanoparticles have a main role in different fields such as pharmaceutical, monitoring, advanced materials and environmental detection. Nanoparticles are in the range of nm with very simple structure. The (AFM) atomic force microscope is suitable for distinguishing the nanoparticles. Nanoparticles are also used for finding data on physical properties such as surface texture, roughness and morphology. Nanoparticles are also having the capacity of 3D perception and together the quantitative and qualitative information. Analytical information like volume distribution, surface area and size.

**Keywords:** Afm, methanol, ammonium hydroxide (NH<sub>4</sub>OH), methyl trimethoxysilane, oxalic acid (C<sub>2</sub>H<sub>2</sub>O<sub>4</sub>)



Paper ID: ICRAITMS\_202012\_101

## **PD Near Mean Cordial Labelling Of Some Disconnected Graphs**

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### **ABSTRACT**

Let  $G = (V, E)$  be a simple graph. Given a bijection  $h: V(G) \rightarrow \{1, 2, \dots, |V(G)|\}$ , we associate two integers  $P = h(u)h(v)$  and  $D = \left\lfloor \frac{h(u)}{h(v)} \right\rfloor$ , where  $h(u) \geq h(v)$  with every edge  $uv$  in  $E(G)$ . The labeling

$h$  induces an edge labelling  $h^*$  defined by  $h^*(uv) = \begin{cases} 0 & \text{if } P + D \equiv 0 \pmod{2} \\ 1 & \text{otherwise} \end{cases}$  and we say  $h$  is PD near mean cordial labeling if it satisfies the condition  $|e_h(0) - e_h(1)| \leq 1$ . A graph  $G$  is PD near mean cordial if it admits PD near mean cordial labeling. In this paper, we prove some disconnected graphs like  $P_\alpha \cup K_{1,\beta}$ ,  $P_\alpha \cup (P_\beta \odot K_1)$ ,  $\cup nP_2$ ,  $P_\alpha \cup S(K_{1,\beta})$  are PD near mean cordial.

Mathematics subject classification: 05C78

Key Words: Cordial labeling, PD mean cordial labeling, PD near mean cordial, PD near mean cordial graph.



Paper ID: ICRAITMS\_202012\_102

## **Corporate Social Responsibility accelerating the functions of Marketing**

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\*\*Amity Business School, Amity university Kolkata, India.

### **ABSTRACT**

The strategies that help an organization live in an ever-changing environment is Corporate Social Responsibility. It is the integrated accountability of the company towards the society and the environment. The value that is generated in the minds of the customers about the company and its products or services, is consolidated called Marketing. A balance is thus maintained to gain and disburse wealth for the existence of the organization. Aligning the lines of marketing and CSR thus sets the foot towards positive growth of the organization towards sustainability. The aim of marketing being creation of value, gets its positive image presented when aligned with the CSR initiatives of the business. The present paper is an empirical research which studies the relation between CSR of a company and customer loyalty. The paper also tries to analyze the relation between CSR and marketing initiatives of a company.

**Key words:** Ever Changing environment, Corporate Social Responsibility, Marketing, Customer Loyalty, Marketing initiatives.



Paper ID: ICRAITMS\_202012\_103

## **INTERIOR DOMINATING SETS AND INTERIOR DOMINATION POLYNOMIALS OF CYCLE $C_{n+3}$**

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### **ABSTRACT**

Let  $G = (V, E)$  be a undirected simple graph. Let  $C_{n+3}$  be the cycle with  $n+3$  vertices and let  $D_{Id}(C_{n+3}, i)$  be the family of interior dominating sets of  $G$  with cardinality  $i$ . Let  $d_{Id}(C_{n+3}, i) = |D_{Id}(C_{n+3}, i)|$ . In this paper, we obtain a recursive formula for  $d_{Id}(C_{n+3}, i)$ . Using this recursive formula, we construct the polynomial  $D_{Id}(C_{n+3}, x) = \sum_{i=\lfloor \frac{n+3}{3} \rfloor}^{n+3} d_{Id}(C_{n+3}, i)x^i$ , which we call interior

domination polynomial of  $C_{n+3}$  and obtain some properties of this polynomial. MSC: 05C69

Keywords: Cycle, interior dominating sets, interior domination polynomial.



Paper ID: ICRAITMS\_202012\_105

## **Examine the students’ satisfaction on usage of online teaching in engineering colleges at twin cities of telangana**

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### **ABSTRACT**

Covid 19 many drastic changes in education system and government have makes policies all of sudden and challenges brought by innovative new technologies and cut throat competitive pressure a, higher education institutions are trying to innovate their service and raise their public reputation. Education is undergoing a dramatic transformation. In this paper researcher find to examine the student satisfaction on usage of online teaching. Research is confined to twin cities in telangana especially among students of UG and PG. Researcher identified that students belong to arts and management are satisfied and somewhat satisfied with online teaching system where as students belongs to technical and sciences education they are dissatisfied in engineering colleges. Among all the female students are satisfied comparatively male students. The students who belong to UG they are not satisfied as much as PG students.

**Key words:** Online teaching methods, Digital learning systems, satisfaction





Paper ID: ICRAITMS\_202012\_106

## **HIGH RATE BIO METHANATION OF VEGETABLE WASTE TO GENERATE BIOGAS AT MONDA MARKET, HYDERABAD TELANGANA.**

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<sup>1</sup>M.E (Water Resource Engineering), Asst. Professor, St. Martin’s Engineering College, Hyderabad, India, 500043.

<sup>2</sup>Btech student, St. Martin’s Engineering College, Hyderabad, India, 500043.

### **ABSTRACT:**

A biogas plant is modern energy source and is suitable to the necessities of the future. With the appropriate application of the digestion technology, the development of economically feasible organic waste biogas digesters which produces electricity is not beyond the realm of possibility. The central purpose of the study is to design the proper power generation unit based on organic waste and to calculate the efficiency of power generation in Monda market of Secunderabad, Telangana. The production of biogas by anaerobic digestion of organic waste is a mature expertise that may present tangible benefits to society. Organic biogas technology can alleviate many grave problems in the developing countries,

“The Bowenpally vegetable market has caught Prime Minister Narendra Modi’s attention for its innovative waste management system. He praised the one-of-its-kind bioelectricity, bio fuel and bio manure generation project in his 73<sup>rd</sup> episode of his monthly radio programme Mann ki baat on Sunday” It can develop in areas such as rural energy scarcity, low agriculture yield and waste management. In addition through the utilization of biogas technology toxic farm waste can be properly handled through anaerobic digestion, generation of natural fertilizers and ultimately lead to an increase in output and income. From analysis it will become apparent that markets using digesters systems have greater earnings or benefits than those markets who do not resulting in the preservation and increase viability of the organic waste.

**Key words:** Biogas, Digesters, Electricity, Efficiency, Anaerobic, Organic waste, Scarcity.



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_108

# **FABRICATION OF ALUMINIUM METAL MATRIX BY STIR CASTING**

**SRIPAL VIJAYAGIRI**

Assistant professor

Department of Mechanical Engineering, St,Martins Engineering College

## **ABSTRACT:**

Advancement of Metal Matrix Composites (AMMCs) with improved tribological property has been one among the principal necessities inside the field of texture science and innovation. These days, 7075 composite with carbide (SiC) as support is replacement the overall parts that square measure manufacturing plant made with alumina support on account of their higher wear opposition and creep obstruction applications. As we as a whole realize that in creating areas gears assumes a significant part in sending power from one shaft to an alternate shaft, along these lines the current work focussed on the delivering of substances with AMMC material exploitation mix projecting strategy. the different tests are led on AMMC material to comprehend the properties (Tensile strength and hardness) and it had been learned that there's an ascent in strength and hardness by ten % contrasted with Al6061. Mix projecting strategy used in the grid planning is best affordable method to give the network. Al 7075-SiC network has been world class for the production since it's likely applications in art and zone businesses because of higher solidarity to weight size connection, high wear obstruction and creep opposition.

**Keywords:**Al 7075 alloy, SiC-p, Stir Casting



Paper ID: ICRAITMS\_202012\_109

## **Implementation of 5S Methodology in the Small Scale Industry: A Case Study**

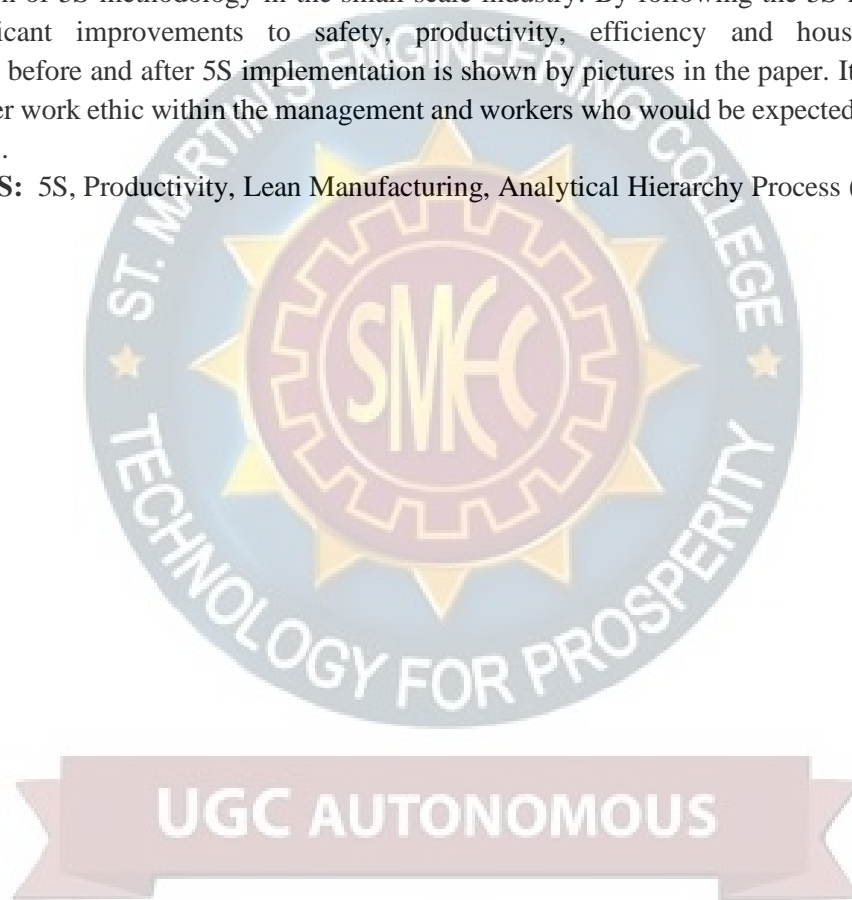
**Chintapally Krishna Priya**

Assistant Professor, Dept of MBA, St.Martin’s Engineering College

### **ABSTRACT:**

5S is a basic foundation of Lean Manufacturing systems. It is a tool for cleaning, sorting, organizing and providing the necessary groundwork for workpiece improvement. This paper dealt with the implementation of 5S methodology in the small scale industry. By following the 5S methodology, it shows significant improvements to safety, productivity, efficiency and housekeeping. The improvements before and after 5S implementation is shown by pictures in the paper. It also intends to build a stronger work ethic within the management and workers who would be expected to continue the good practices.

**KEYWORDS:** 5S, Productivity, Lean Manufacturing, Analytical Hierarchy Process (AHP).



Paper ID: ICRAITMS\_202012\_110

## **A STUDY OF GEARED VARIABLE-SPEED COUPLING FOR LOW-SPEED DRIVEN MACHINES**

**MUKUNDA DABAIR<sup>1</sup>, NALLA SNEHA<sup>2</sup>**

<sup>1,2</sup> Asst professor st martin's engineering college

### **ABSTRACT:**

Geared variable speed turbo coupling as boiler feed pump drive. Having a mechanism of working of the geared variable speed turbo coupling(R-K coupling) and Variable-speed turbo couplings(S-coupling). This paper presents the detail study over the fluid coupling having a variable speed with gear inputs for low-speed driven machines. Considered a flow coupling R16 K-1 with the specifications and particular input the design calculations and analysis were be taken to decide the performance of the fluid coupling with low-speed driven machines. This paper concludes the design, functioning, performance with experimental results of the variable speed coupling

**Key points:** Fluid coupling, Variable speed, Experimental results.



Paper ID: ICRAITMS\_202012\_112

## **General Indian English (GIE) as a model of English pronunciation for engineering students in Telangana State**

**Dr.Y.Sridevi**

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ICRAITMS\_202012\_112

### **ABSTRACT**

The first and foremost objective of this paper is to explore the possibility of replacing the current model of English pronunciation Received Pronunciation (RP), also known as BBC Accent, which is used in the engineering colleges in Telangana. What we set out to do is to underscore the fact that there is very little impact of RP which is also currently known as BBC pronunciation on the engineering students in Telangana State. In the Indian education system, we have been following RP for the decades as the model of English pronunciation for pedagogical purposes and communicative English.

There are many native models of English pronunciation and some non native English pronunciation which are available for the academic purposes. As regards the native models of English pronunciation there are BBC accent formerly known as RP, GA English pronunciation, Australian English pronunciation. As far as the non native models of pronunciation are concerned, the most notable model is General Indian English GIE propounded by Prof. Bansal actually sounds out.

It is high time that we replaced BBC English accent (RP) with the non native model of General Indian English pronunciation namely GIE propounded by Prof.Bansal. It is a well known fact that the use of native model of English pronunciation BBC has had very little impact on the pronunciation of the students. Despite the fact that the engineering students who have been exposed to BBC accent in the language lab with plenty of pronunciation drills, there is virtually little change in their English pronunciation. In fact, the engineering students are trained rigorously in the lab when it comes to segmental features like vowels, consonants, diphthongs and supra segmental features such as stress, rhythm, Intonation, strong and weak forms.

An effort should be made to use GIE pronunciation in the engineering class room with the view of finding out whether it can be a good alternative to the failed native model of English pronunciation RP. Unless GIE is tried out and tested in the engineering class room, we do not know for sure whether it can be a good alternative to BBC (RP).

Key word: Communicative English, General Indian English, Received Pronunciation, segmental and suprasegmentally

Paper ID: ICRAITMS\_202012\_113

## **STUDY ON FABRICATION PROCESS OF GERAED VARIABLE–SPEED TURBO COUPLING**

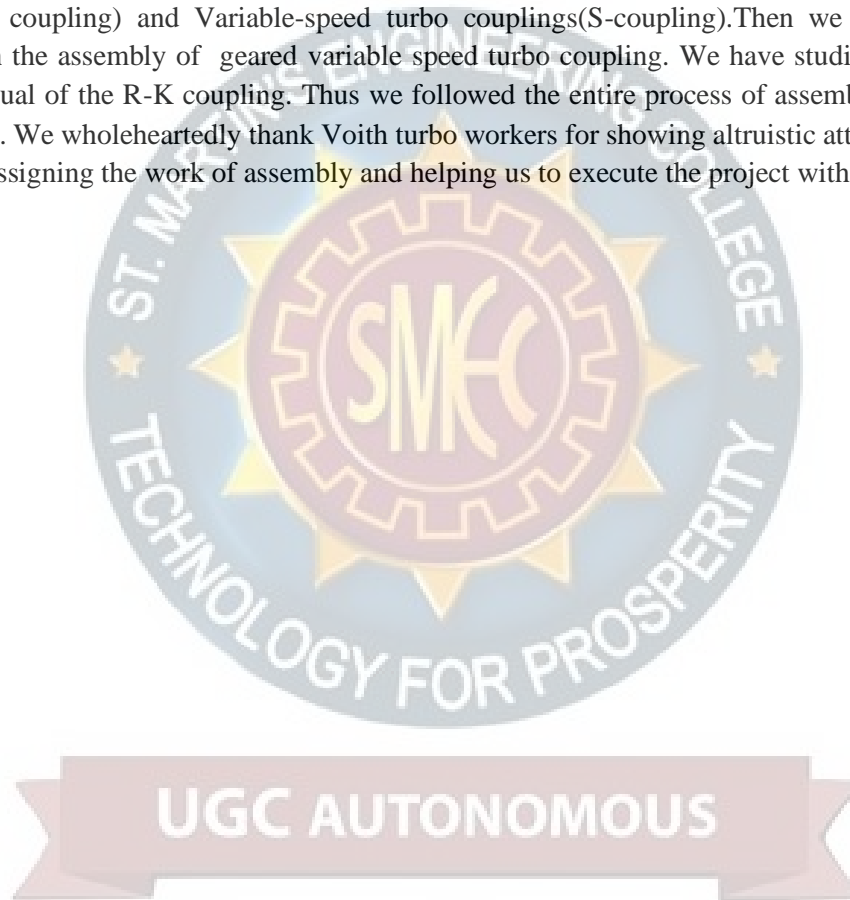
**K. Archana<sup>1</sup> N. Sneha<sup>2</sup>, Ch. Nagaraju<sup>3</sup>, A. Ranjith<sup>4</sup>**

<sup>1,2,3,4</sup> Assistant Professor

<sup>1,2,3,4</sup> St martin’s Engineering College, Secunderabad,Hyderabad-500100

### **ABSTRACT**

The aim of our project was to assemble Geared variable speed turbo coupling as boiler feed pump drive. We have first understood the enter mechanism of working of the Geared variable speed turbo coupling(R-K coupling) and Variable-speed turbo couplings(S-coupling).Then we have done the experiment on the assembly of geared variable speed turbo coupling. We have studied the previous assembly manual of the R-K coupling. Thus we followed the entire process of assembly step by step systematically. We wholeheartedly thank Voith turbo workers for showing altruistic attention and faith in our work, assigning the work of assembly and helping us to execute the project with efficacy.



Paper ID: ICRAITMS\_202012\_114

## **A Conceptual Framework on Effectiveness of Human Resource Management Impact on Improving HR Policies**

**K SUDHA, ASSISTANT PROFESSOR**

DEPARTMENT OF SCIENCE AND HUMANITIES

ST. MARTIN'S ENGINEERING COLLEGE, DHULAPALLY, SECUNDERABAD-500100

### **ABSTRACT**

This study examines and analyzes the role of Human Resources Policies on improving the effectiveness of Human Resource Management. The aim of this study is to analyze the main indicators of organizational management that includes four subscales, Training, Self-development, Promotions and Performance appraisal of manpower recruited in an organization.

This investigation to contemplate the connection between work fulfillment and wellbeing. A deliberate survey and meta-investigation of 485 examinations with a consolidated example size of 2,67,995 people was led, assessing the exploration proof connecting self-report proportions of employment fulfillment to proportions of physical and mental prosperity. The general connection consolidated over all wellbeing measures was  $r = 0.312$  (0.370 after Schmidt-Hunter change). Job satisfaction was most firmly connected with mental/psychological problem.

**Keywords:** Human Resource, Education, Management, and HR Policies



Paper ID: ICRAITMS\_202012\_116

# **A REVIEW ON REVOLUTION OF NANO TECHNOLOGY IN FUTURE MEDICINE**

**B. MALLESWARI**

Assistant Professor, St. Martins Engineering College, Dulapally, Kompally.500100

## **ABSTRACT**

The General inquisitiveness of human Character initiated to the development of nano medicine in the process of inquiry and the process of modern scientific methodological development. Current decade have witnessed an exceptional development in the application of nano technology application to the medicine known as nanomedicine. The applications such as medical diagnoses, imaging, disease prevention, drug delivery, gene therapy, cancer treatment and other areas have incredibly progressed. The potential for nanoparticles in these areas is immeasurable, as novel applications are constantly being explored. The probable noxious health effects of these, associated with human exposure are unknown. Nanomedicine needs to conquer the challenges for its application, to improve the perceptive of path physiologic source of diseases, fetch more complicated diagnostic opportunities, and acquiesce more efficient therapies and deterrent properties. If doctors get access to robots, they can able to cure promptly most known diseases that shamble and kill the public today, it helps to quickly repair the majority of physical injuries, and to immensely lengthen the human life span. In this article, I made an effort to have an early glance on the future impact of nanotechnology in medicine along with certain pros and cons, exceptional technological and industrial recompenses of the nanotechnology and its advantage to human.

Keywords: Nano medicine, nano diagnostics, nanotechnology advantages, Regenerative medicine, Nanotechnology.





Paper ID: ICRAITMS\_202012\_117

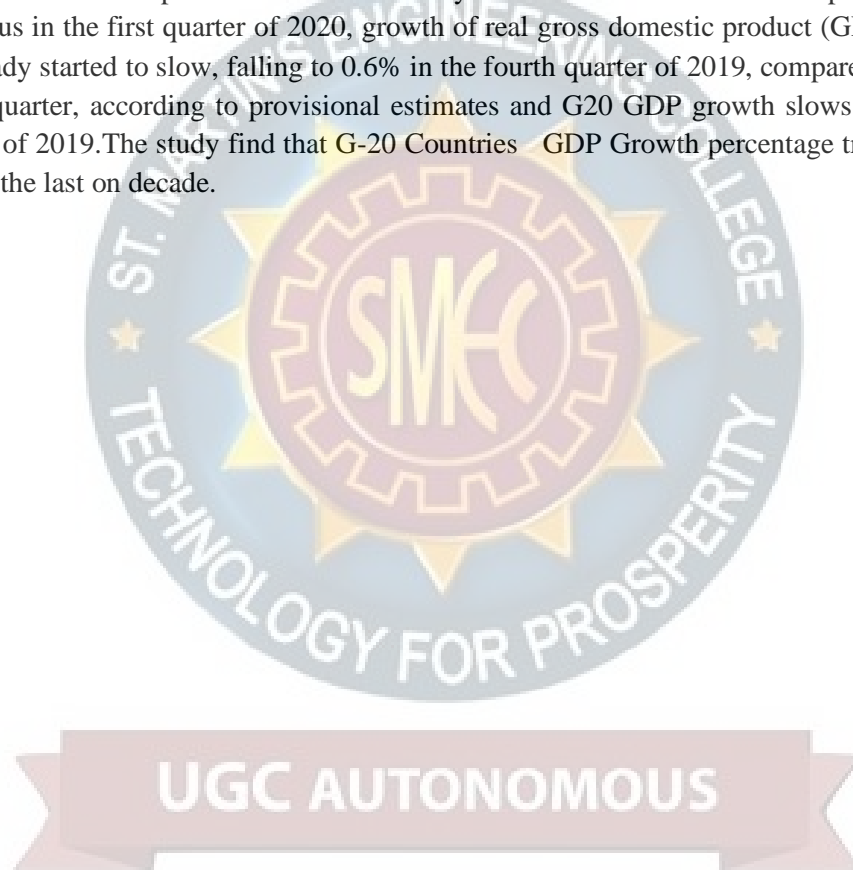
**A study on**  
**“Impact of COVID-19 on Global Economy Growth with special reference to G-20”**

**Dr Y. Venkata Rangaiah Professor**

Department of Management, St. Martin’s Engineering College, Secunderabad,

**ABSTRACT**

COVID -19 has high impact on Emerging markets, especially in G-20 Countries, have so far felt the worst effects of the virus outbreak. Many countries depend heavily on China and are also physically at greater risk of a more widespread outbreak. The study reveals that Prior to the widespread outbreak of the corona virus in the first quarter of 2020, growth of real gross domestic product (GDP) in the **G20 area** had already started to slow, falling to 0.6% in the fourth quarter of 2019, compared with 0.8% in the previous quarter, according to provisional estimates and G20 GDP growth slows to 0.6% in the fourth quarter of 2019. The study find that G-20 Countries GDP Growth percentage trend movement year wise for the last on decade.



Paper ID: ICRAITMS\_202012\_118

## **DESIGN OF WATER SUPPLY NETWORK IN SANJEEVAPURAM VILLAGE IN GOPALAPURAM MANDAL IN WEST GODAVARI DISTRICT OF ANDHRA PRADESH STATE USING EPANET 2.0**

**SANDHYA KIRAN J.K<sup>1</sup>, CHALLA. DATTA KARTHIK<sup>2</sup>, CH.SAI PRASAD<sup>3</sup>, K.NIHARIKA<sup>3</sup>, K. SHARATH KUMAR<sup>3</sup>, D. HARSHA VARDHAN<sup>3</sup>**

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<sup>3</sup>Btech student, St. Martin’s Engineering College, Hyderabad, India, 500043.

### **ABSTRACT:**

Drinking water is the main resources for the humans to survive.It is mandatory to supply water to the household using better water supply network .Many villages in the Andhra Pradesh does not consist of proper water supply network.Therefore, government of Andhra Pradesh decided to lay drinking water supply network to the villages.to overcome problems in designing the network and for the perfection of the network EPANET2.0 software is used This projects aims to design the water supply network economically using surveying data and population data of the village.Population data is used to find the water demand of the village at the end of design period . By using this data better water supply network is designed using EPANET2.0 software.Estimation of head loss is done by Hazen-William’s Equation This research has been intensively worked to reach the c needs and also has been developed to intend to put forth to Government of Andhra Pradesh, to solve the catastrophic situation of the people there.

**Key Words:** EPANET2.0, Hazen-William’s Equation, Headloss, Population and Survey data, Water Supply Network

UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_121

## **Experimental Study on Toughness Property of Fiber Reinforced Self Compacting Concrete (FRSCC)**

MRS. A.SRAVANI<sup>1</sup>, B.RAMA KRISHNA<sup>2</sup>  
MD.ABDUL MOEED<sup>3</sup>, CH.SRIMUKHI REDDY<sup>4</sup>,

1 Faculty, Department of Civil Engineering, St Martin’s Engineering College, Dhullapally, Telangana, India.

2,3,4 Student ,Department of Civil Engineering, St Martin’s Engineering College, Dhullapally, Telangana, India.

### **ABSTRACT**

The objective of this work is to investigate the toughness property of the fiber reinforced self-compacting concrete (FRSCC) through experimental studies. In this work, different (0.5%, 1.0%, 1.5%, and 2%) percent of steel fibers are added by volume of concrete and (0.5% & 1.0%) percent of poly-propylene are added by mass of binding material. To achieve the self-compacting concrete (SCC) mix design has been done according to the EFNARC guidelines. The limitations also achieved according to the European guidelines. By using different types of fibres the toughness property of the FRSCC has been studied. To find the toughness of FRSCC the JSCE SF-4 method is used. It has been observed that the toughness increased with increase in percentage (%) of fibres up to 1.5%. While, increase in percentage (%) fibre content beyond 1.5% resulted in lower toughness for the steel fibers. It give the only the limitation of steel fiber for SCC is up to 1.5% of volume of concrete. The comparative study also reported for mechanical properties of fiber reinforced self compacting concrete.

Keywords— JSCE SF-4, Poly-propylene fiber, Steel fiber, Self-compacting concrete, toughness property.



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_122

## **ANALYSIS OF G+5 RESIDENTIAL BUILDING WITH STAAD PRO BY WIND LOAD**

**S BALIRAM<sup>1</sup>, G. NITHISHA<sup>2</sup>, S. GANESH<sup>3</sup>, Y. DIVYA<sup>4</sup>, M. PRANEETH KUMAR<sup>5</sup>**

[1] Assistant Professor, Department of Civil Engineering, St Martin’s Engineering College, Kompally, Hyderabad.

[2][3][4][5] Students, Department of Civil Engineering, St. Martin’s Engineering College, Kompally, Hyderabad.

### **ABSTRACT**

It is very important for civil engineers to save time in order to be able to compete in a growing and competent market. This is followed by an attempt to analyze and design the home using the STAAD software package. An analysis of a Pro home should consider all possible loads and ensure that the structure is safe for all possible load conditions. There are several ways to analyze different frameworks, including the Kany, cantilever, portal, and Matrix methods.

This project deals with the analysis of G + 5 homes. Dead and live loads were applied and beam, column and slab designs were acquired using STAAD software such as AutoCAD. We conclude that STAAD. Pro is a very powerful tool, saves a lot of time and the design is very accurate. Therefore, it can be concluded that the STAAD. Pro package is suitable for the design of residential buildings (G + 5). Details of this source text Source text required for additional translation information

**KEYWORDS:** Auto CADD, Cantilever method, Kani’s method, Matrix method, Portal method, STAAD PRO.



Paper ID: ICRAITMS\_202012\_123

## **EXPERIMENTAL STUDY ON REPLACEMENT OF FINE AGGREGATE WITH FLY ASH AND STONE DUST IN CONCRETE**

**K. Arundathi**

<sup>1</sup>Assistant Professor, Department of Civil Engineering, St. Martin’s Engineering College, Secundrabad-500100, Telanganastate, India.

**N. Shivani, V. Vamshi Krishna, B. Venkat, D. Sandeep**

Students, Department of Civil Engineering, St. Martin’s Engineering College, Secundrabad-500100, Telangana state, India.

### **ABSTRACT**

The cement is the main ingredient used for concrete. The production of cement gives rise to CO<sub>2</sub> emissions generated by the calcinations of CaCo<sub>3</sub> & by the fossils, being responsible for about 5% of the Co<sub>2</sub> emissions in the world.

This can be substantially reduced if cement is used with admixture such as a fly ash are used within the frame work of a comprehensive research concerning this residual of coal industries, studied some durability characteristics of concrete made with Fly ash.

In this project report, the results of the tests were carried out on design strength on concrete. Also, aiming the use of fly ash as admixture with cement and sand replacement with stone dust. The present experimental investigation was carried on fly ash & has been chemically and physically characterized, and using fly ash as admixture and stone dust as replacement of sand by weight of cement in concrete. The result indicates that fly ash & stone dust improves concrete durability.



Paper ID: ICRAITMS\_202012\_124

## **CASE STUDY ON SUB URBAN VILLAS**

**K. Arundathi<sup>1</sup>, D.Navaraj, T.Abhishek, Hemavanth reddy N, K.Nikhil**

Assistant Professor, Department of Civil Engineering, St. Martin’s Engineering College,  
Secundrabad-500100, Telangana,state, India.

Students, Department of Civil Engineering, St. Martin’s Engineering College, Secundrabad-500100,  
Telangana state, India.

### **ABSTRACT**

With the rapid development of society, modern buildings have been consuming excessive amount of energy and resources. Eco-friendly building is going to be the leading style of architecture in the future. Villa, as a type of energy efficient architecture, has widely drawn humans’ attention. This study tells the typical villas in western developed countries and it briefly states the sequence of work of villas. In its modern form, a villa is a form of residential community or housing estate containing strictly controlled entrances for pedestrians, bicycles and automobiles, and often characterized by a closed perimeter of walls and fences. Villas usually consist of small residential streets and include various shared amenities. For smaller community this may be only a park or other common area. For larger communities, it may be possible for residents to stay within the community for most daily activities. Gated communities (villas) are a type of common interest development, but are distinct from intentional communities.

**Key words:** Setting out.



Paper ID: ICRAITMS\_202012\_125

# **DESIGN AND ANALYSIS OF UNIVERSAL JOINT FOR EFFECTIVE TRANSMISSION AND DECIDE MATERIAL TYPE**

**Sake Vijayanirmala**

\*Assistant Professor, Department of Mechanical Engineering, St. Martin’s Engineering College, Hyderabad, Telangana, India

## **ABSTRACT:**

The universal joint is considered to be one of the oldest of all flexible couplings. It is generally known for its utilization on vehicles and trucks. An all universal joint in its least complex structure comprises of two shaft yokes at right angle to each other and a four point cross which interfaces the yokes. The cross rides inside the bearing cap assemblies, which are squeezed into the yoke eyes. Industrial applications work continuously and with high torque loads. This requests most extreme quality and long existence of the all universal joint segments. The advanced all universal joint has turned out to be significantly more mind boggling than its straightforward predecessor. The aim of project is to design and perform structural analysis on universal joint to find out stresses induced in it.



Paper ID: ICRAITMS\_202012\_127

## **STRUCTURAL BEHAVIOUR OF HIGH-PERFORMANCE CONCRETE USING METAKOLIN AND M-SAND**

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**<sup>3</sup>E. Ram reddy, <sup>4</sup>R. Sandeep reddy, <sup>5</sup>A. Sandeep reddy, <sup>6</sup>p. vivek**

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### **ABSTRACT:**

However, environmental concerns both in terms of damage by extraction of raw materials and carbon di oxide emission during cement manufacture have brought pressure to reduce the cement consumption by the use of supplementary materials. High-Performance Concrete (HPC) is the latest development in the concrete. Study has been carried out to assess the strength properties of HPC by replacement of cement by Metakaolin with three proportions that is 5%, 10% and 20% Natural Sand by M-Sand (Manufactured Sand) by six proportions that is 10%, 20%, 40%, 80% and 100% and with same aggregate binder ratio of 2.5 and various water binding ratios of 0.30, 0.35 evaluating its compressive strength, split tensile strength and flexural strength. Metakaolin used as a partial replacement of cement which was treated as an economical and due to its pozzolanic action increases strength and durability properties of concrete.

**Key Words:** Manufactured Sand, Metakaolin, Plasticizer, Strength properties, High performance concrete.





Paper ID: ICRAITMS\_202012\_128

# **A STUDY ON THE IMPACT OF SOCIAL MEDIA MARKETING STRATEGIES ON MARKETING PERFORMANCE**

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Department of Commerce, Madras Christian College, (Autonomous), University of Madras, Chennai,  
India.

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## **ABSTRACT:**

Social media is an essential element of recent times. It is used in modern businesses to enhance market profit status. Marketing with social media is now a new tool to cope-up with new challenges and competencies with other marketers. This paper focuses on finding out some useful tools for innovative social media marketing and improving marketing performances. This paper also gives a gist of social media channels used by top brands and the challenges faced by marketers. Studies have been conducted on many social media marketing and social media marketing strategies, but this paper aims specifically at the status of social media marketing in India, effective social marketing tools such as microblog, microsites, video sharing, social bookmarking and discussion forums. In the 21st century, marketers are shifting towards revolutionary changes in the modern market and they are adopting new techniques and strategies for profitable marketing. Challenges faced by marketers in social media usage have also been discussed in this paper with some effective and strong strategies to apply before jumping into digital marketing.

**Keywords:** Social Media, Social Media Analytics, Social Media Marketing Strategies, SMM, Advertising, Innovative Marketing Strategies, Microblogging, Online Marketing.



**UGC AUTONOMOUS**

Paper ID: ICRAITMS\_202012\_129

## **Design and optimization of vehicle crush box with different parameters shape, strength, rib, crush initiator**

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<sup>3</sup>Research Associate, Mechanical Engineering, VIT, Vellore.

### **ABSTRACT**

The research is to make optimized crush box to resist the crash with nominal damage on low speed impact in vehicle. For that, our aim to find out the shape, strength, number of rib, number of crush initiator in the crush box to pull off maximum energy absorption. The crush box were designed with different amalgamation of shape like box, tube, hexagon and varying steel material like low, medium, high strength while 0,1,2 ribs and 0,2,4 crush imitators. These experiments were steadily designed and analyzed by Taguchi method using L9 array. According to the design of experiments, the crush box were design by using design software. The numerical models were developed to forecast the result and obtained results were in good consistency with experimental result. Finally the optimized design was Tube shaped high strength steel material with two rib and without crush initiator which absorbs the maximum energy.

**Keywords**— Crush Box, Orthogonal Array, DFSS, Taguchi Method, Rib, Crush initiator.



Paper ID: ICRAITMS\_202012\_132

## **ANALYSIS OF RC FRAME STRUCTURE WITH STEEL BRACINGS**

**Rohini.P<sup>1</sup>, Rohit Katakam<sup>2</sup>, G Venu<sup>3</sup>, E Jashwanth<sup>4</sup> and A Vinodkumar<sup>5</sup>**

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<sup>3</sup> G Venu, student St.Martins Engineering College, Telangana , India,

<sup>4</sup> E Jashwanth, student St.Martins Engineering College, Telangana , India,

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### **ABSTRACT**

The brittle nature of traditional concrete has fuelled the interest in developing fiber reinforced concretes since the random orientation of the discrete fibers in cement based matrix can lead to improved toughness and tensile properties. In this study seismic performance of an RC building using 1% Steel fiber reinforced concrete material for M30 grade concrete. Pushover analysis is conducted to evaluate the seismic responses of the structure in terms of base shear, displacement, time period and location plastic hinges. A comparative study on G+4 building with conventional RC and SFRC were analyzed and designed for gravity loads. Push over analysis has been done with displacement coefficient method. The results indicated that 15.83% of strength, 11.54% of stiffness and 4.83% of ductility are increased by using 1% of SFRC material compared to conventional concrete.

### **Keywords**

Push over analysis, displacement coefficient method, base shear, time period, seismic responses, Steel fiber reinforced concrete, linear static analysis



**UGC AUTONOMOUS**

Paper ID: ICRAITMS\_202012\_133

# **EXPERIMENTAL INVESTIGATION ON STRUCTURAL PROPERTIES OF M20 GRADE CONCRETE BY THE PARTIAL REPLACEMENT OF FINE AGGREGATES WITH STONE DUST**

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## **ABSTRACT:**

Stone dust is a waste material obtained from crusher plants. The concept of replacement of natural fine aggregate by stone dust which is highlighted in the study could boost the consumption of stone dust generated from quarries. By replacement of stone dust the requirement of landfill area can be reduced and can also solve the problem of natural sand scarcity for future generations. The availability of sand at low cost as a fine aggregate in concrete is not suitable and that is the reason to search for an alternative material. An experimental program was carried out to study the workability and compressive strength of concrete made using stone dust as partial replacement of fine aggregate in the range of 20%, 40%, 60%, and 80%. Workability, Split tensile strength, Flexural strength and compressive strength were determined at different replacement levels of fine aggregate and optimum replacement level was determined based on compressive strength.

Keywords: Compressive Strength, Flexural strength, Low cost, Stone Dust, Tensile strength, Workability.



UGC AUTONOMOUS

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## **AN OVERVIEW OF FRICTION STIR SPOT WELDING: PROCESSES AND VARIABLES.**

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### **ABSTRACT**

Welding is the process of joining together two pieces of metal so that bonding takes place at their original boundary surfaces”. When two parts to be joined are melted together, heat or pressure or both is applied and with or without added metal for formation of metallic bond. In Automobile industry all over the world are continuously searching for innovative ways and technique to reduce manufacturing costs without scarifying built quality and automotive safety. To improve the performance of the vehicles many companies are trying to reduce the weight of the vehicle so that they can reduce the pollution which will reduce the load of the vehicle substance. The joining process of similar and dissimilar materials plays a vital role in various areas, include manufacturing. Many conventional welding processes have been used years together to successfully join various materials. The aim of this paper is, the Improvements in welding technology were applicable to the offshore industry are described in three broad processes such as friction stir welding (FSW), friction stir spot welding (FSSW) and electric resistance spot welding (ERSW). In each process, selected advances are reviewed also presented basics, principles, variables advantages and disadvantages in engineering

**Keywords:** FSW (Friction Stir Welding), FSSW (Friction Stir spot Welding), ERSW (Electrical Resistance spot welding) Dwell Time, Rotation Speed, Welding force.



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_135

## **Mental Health Status of Young Generation during the COVID-19 Pandemic**

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### **ABSTRACT**

The effects of Corona Virus disease 2019 (COVID-19) on the population’s mental health and well-being are likely to be profound and long lasting. The pandemic may have detrimental mental health consequences. However, there is limited understanding of its impact on the mental health of the general population. The global community is concerned about COVID-19 and its long-term consequences. It is impacting various spheres of life such as the economy, industries, global market, agriculture, human health, health care, etc. Mental health in India worsened substantially as a result of 7.5% of the Indian population suffers from some form of mental disorder on average. Hence inequalities in mental health have been increased during the pandemic.

**Keywords:** COVID-19, Mental health, Young Generation, stress, anxiety, depression.



Paper ID: ICRAITMS\_202012\_136

## **Seismic Behavior of Reinforced Concrete Frame with Different Infills**

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### **ABSTRACT**

The present study investigate the seismic performance of reinforced concrete framed building with bare frame, equivalent diagonal strut, R.C wall and shear wall. The seismic behavior of a 10-storey building investigated using response spectrum analysis. Equivalent diagonal strut methodology is used to represent the behavior of infill walls, whilst the well-known software package ETABS is used for implementing all frame models and performing the analysis. The results such as maximum displacement, maximum drift, storey shear, base shear and mode shapes for the bare frame as well as the equivalent diagonal strut, R.C wall and shear wall are presented in a comparative way. The results of the study indicate that the interaction between infill walls and frames significantly change the responses of buildings during earthquakes compared to the results of bare frame building model. While comparing base shear, the value drastically decreases for the bare frame coming to the base shear for other models uniformly decreases. Whereas comparing storey drift, the value considerably decreases for the bare frame coming to the storey drift for other models uniformly increases.

**Keywords**— Bare frame; Equivalent diagonal strut; R.C wall; shear wall; Response spectrum analysis;



**UGC AUTONOMOUS**

Paper ID: ICRAITMS\_202012\_137

## **EFFECT OF BRACINGS ON SEISMIC ANALYSIS OF A MULTI – STOREYED BUILDING RESTING ON SLOPING GROUND**

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St.Martin’s Engineering College, Hyderabad.

### **ABSTRACT**

In the present scenario, most of the buildings are often constructed on sloping ground due to increase in population and expansion of cities and lack of plane ground. The behaviour of building during earthquake depends upon distribution of stiffness and mass in vertical and horizontal planes, both of which vary in case of building resting on sloping ground. These buildings situated on hill slopes in earthquake prone areas are generally irregular, torsion ally coupled and hence susceptible to severe damage when affected by earthquake ground motion. The shorter columns in such buildings attract relatively higher magnitude of forces when compared to the longer columns when subjected to earthquake. These unsymmetrical buildings require great attention in the analysis and design.

In this thesis, seismic analysis of a 10 storeyed RC framed building resting on sloping ground model is carried out. Seismic response of the building is carried out using Linear Static Analysis and Linear Dynamic Analysis (Response Spectrum Method and Time History Method) using a commercially available finite element software. The scope of the project includes comparison of the RC framed building resting on plane ground and building resting on sloping ground with and without provision of two lateral load resisting systems, i.e, Bracings and Shear walls. Comparison of different parameters like storey shear, storey drift, mode periods, modal participation factors etc., is studied. It is found that the building with RC bracings and shear walls could able to resist the earthquake forces effectively and satisfying the requirements of Bureau of Indian Standards.

**Keywords**—Lateral load resisting system, Response Spectrum Analysis, Time History Analysis, SAP2000 (key words)





Paper ID: ICRAITMS\_202012\_140

## **A Study on Sensitive Analysis of Stock Market Returns at Sykes & Ray Equities Ltd Hyderabad**

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### **ABSTRACT**

Investment is a commitment of funds made in the expectation of some positive rate of return. The main objective of investment is to minimize the risk and maximizing the returns. There are number of financial instruments such as bonds or debentures, life insurance, bank deposits, postal, recurring deposits and mutual fund schemes. These have minimum risk with moderate returns. Equity shares and derivatives have high risk and returns. The magnitude of risk and return depends upon many numbers of factors such as economical parameters, socio- environmental factors, Government policies and changes in the world economy. This study aims to develop the relationship between the economic variables and NSE indices such as CNX 500, CNX NIFTY, CNX 100, MIDCAP 50, and NIFTY JUNIOR. This study also shows the sensitivity of nifty index with respect to the GDP rates and the inflation rates. The increase in GDP rates leads to the increase in SENSEX prices where as the increase in inflation leads to the decrease in prices of SENSEX.

**Keywords:** GDP, FII's and DII's.



Paper ID: ICRAITMS\_202012\_141

## **STRESS ANALYSIS OF A BALL GRID ARRAY PACKAGE USING FINITE ELEMENT METHODS**

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### **ABSTRACT**

In the recent years, due to the miniaturization there have been an intense demand for highly reliable and low cost and high performance electronic components. Electronic Packages may experience warpage during package fabrication and later during surface mount assembly. Excessive warpage may result in loss-of coplanarity, open connections, misshaped joints, and reduction in package board-level reliability. Failures associated with thermo-mechanical stress are common in electronic assemblies. Warpage is defined as the displacement of the package center relative to the reference plane. The difference between heating and cooling is most likely due to a temperature gradient in the package due to which warpage occurs. Warpage induced due to the coefficient of thermal expansion(CTE) mismatch between different kinds of materials is a mechanical issue in the reliability of Electronic packages. This paper aims to study the stress analysis of BGA Package with a new design implementation of overmolded package and impact of variation of CTE of the substrate material in reducing the warpage of the BGA Package. A BGA package replaces the peripheral bond pads of traditional wire bond interconnect technology with area array interconnect technology at the die/substrate level. It utilizes conductive heat bumps which are placed directly on the area array pads of the die surface to provide connectivity.

**Keywords-** Electronic package, Warpage, Stress Analysis, reflow temperature, Over mold, ABAQUS, Finite element Method.



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_144

## **ASSEMBLY OF PRODUCTS WITH INDUSTRIAL ROBOTS ON A MOVING ASSEMBLY LINE**

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### **ABSTRACT**

Robot safety standards define Collaborative Operation as a state in which purposely designed robots work in direct cooperation within a human defined workspace. i.e., an industrial robot and an operator complete assembly tasks at the collaborative workspace. A precaution to ensuring safety during all phases of operation is an understanding of the natural hazards happens to collaborative systems. Where plastic panels are assembled on a continuously moving line i.e., an automotive assembly station formed the basis for research operations meant to understand safety issues when a large industrial robot aids an operator in assembly tasks. This leads to the development of a lab demonstrator whose design and functioning will be presented in this article. Additionally, the hazards identified during risk assessment along with measures to rectify the associated risks will be presented in order to highlight the nature of hazards pertinent to collaborative systems.

**Key words-** Risk Assessment, Collaborative Operations, Industrial Robots, Assembly aspects, Hazards



Paper ID: ICRAITMS\_202012\_145

## STABILIZATION OF CLAYEY SOIL USING RICE HUSK ASH AND LIME

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### ABSTRACT

Rice husk ash (RHA) is a by-product of rice milling. Its use as a soil stabilizer is an alternative to the final disposition with environmental benefit. Because RHA is not self-cementitious, a hydraulic binder such as lime must be added to form cements to improve the soil strength. Research on stabilization by applying RHA and lime combinations were conducted in clayey soils. The formation of cementitious compounds was observed in mixtures of soil with different RHA and lime contents. Unconfined compression strength tests were conducted on soils treated with RHA and lime. Results show strength improvements for all RHA and lime contents. The present experimental work briefly describes the suitability of the locally available Rice Husk Ash (RHA) to be used in the local construction industry in a way to minimize the amount of waste to be disposed of in the environment causing environmental pollution. Soil sample taken for the study is clay with high plasticity (CH) which truly requires to be strengthened. The soil is stabilized with different percentages of rice husk ash (2.5, 5, and 7.5%) and lime (2, 4, 6, 8, and 10%). Observations are made for the changes in the properties of the soil such as Maximum dry density (MDD), Optimum moisture content (OMC), California bearing ratio (CBR) and Unconfined compressive stress (UCS). The results obtained show that the increase in RHA content increases the OMC but decreases the MDD. Also, the CBR value indices of soil are considerably improved with the RHA content. Observing the tremendous improvement of CBR-value of the soil, the present method of stabilization technique may mostly be recommended for construction of pavement.

**Keywords:** Rice Husk Ash (RHA), Lime stabilization, CH soils, CBR

UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_146

## On Henstock – Kurzweil Hilbert Transform

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### ABSTRACT

In this paper the Hilbert transform is considered as H - K Integral (Gauge). The necessary and sufficient conditions are given for the Hilbert Transform of a function  $f$  to be continuous. Elementary and Analyticity are discussed. Finally the existence of Henstock - Kurzweil Hilbert Transform of some functions have been studied and found the inverse of the HK - Hilbert Transform.

**Keywords** - Hilbert Transform, H - K Integral.



Paper ID: ICRAITMS\_202012\_147

## REVIEW ON MATHEMATICAL MODELS

Asst. professor:S.Nageshwar Rao

College:St.Martin’s Engineering college

### ABSTRACT:

**Mathematical Models in Engineering (MME)** publishes mathematical results which have relevance to engineering science and technology. Formal descriptions of mathematical models related to engineering problems, as well as results related to engineering applications are equally encouraged. Applications of mathematical models in financial engineering, mechanical and aerospace engineering, bioengineering, chemical engineering, computer engineering, electrical engineering, industrial engineering and manufacturing systems, nonlinear science and technology are especially encouraged. Mathematical models of interest include, but are not limited to, ordinary and partial differential equations, nonlinear analysis, stochastic processes, calculus of variations, operations research. Numerical method and program for computing inlet flow distribution in sedimentation tanks. Models describe our beliefs about how the world functions. In mathematical modelling, we translate those beliefs into the language of mathematics. This has many advantages

1. Mathematics is a very precise language. This helps us to formulate ideas and identify underlying assumptions.
2. Mathematics is a concise language, with well-defined rules for manipulations.
3. All the results that mathematicians have proved over hundreds of years are at our disposal.
4. Computers can be used to perform numerical calculations.



Paper ID: ICRAITMS\_202012\_148

## Smart Garbage Management: Through a Gamified Solution

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### ABSTRACT

Day by day India's population is rising and there is a race against time to find smart garbage management strategies. In 2015, 100 Smart Cities Mission was launched by our Prime Minister. In 2016, 20 cities completed the first round of Smart Cities Mission. Smart Cities Mission requires people who actively participate in governance and reforms. Government is promoting various Smart solutions like Swachh Bharat Mission.

Garbage management in urban areas is always challenging. To provide a smart and innovative mechanism to support Smart City developments and to solve the garbage management problem for urban areas, this study has designed, developed, and implemented a Smart Solution, aptly named as Clean for U.

To increase the awareness of hygiene and involvement of citizens, this study has designed and developed a mobile application which will help them to locate the nearby Smart Bins and use them to get rewarded using gamification system. This application will coordinate with the IoT based Smart Bin and with Municipal authorities to collect, monitor and manage the garbage system. It will help citizens to capture road side garbage littering and inform the authorities for corrective actions. It will generate analytical reports which help in managerial decision-making.

**Keywords:** Smart City, Smart Bin, Reward System, Gamification, Garbage Management.



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_149

## ANALYSIS OF HIGH RISE BUILDING INCLUDING EARTHQUAKES

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### ABSTRACT:

In Present scenario construction of high rise building with floating column is a distinctive feature in urban India. As per IS: CODE-1893:2016 floating column construction is prohibited but there is no limitation and restriction for research work. The purpose of this research is to study seismic response of a building and to analyze and build the structure in which there will be less damages to the structure and its component under the excitation of earthquake. The paper deals with validation of the software has been done in relation to the literature and further matters have been decided and studied based on the validation result. Finite element-based software like Staad-Pro has been used, Equivalent static method and response spectrum method have been used for analysis. The results have been obtained in terms of base shear, displacement, storey drift, time period etc. Based on results it was concluded that triangular plate in floating column building reduces displacement and base shear of building.

**Keywords:** High rise building Floating column, Dynamic analysis, Staad-Pro





Paper ID: ICRAITMS\_202012\_150

## **Leveraging Technology in Small Finance bank with special reference to Ujjivan and AU Small Finance Banks**

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### **ABSTRACT:**

It's not that we use technology, we live technology- Godfrey Reggio The world has been revolving around the term "Technology". The usage of technology has been widened in the past decade. To make significant changes in the business models they leverage technology. When an organisation harnesses the power of technology, the investments pay off in an exponential return. Thus, most of the organisations are leveraging technology. The Reserve Bank of India (RBI) which is the governing body of the banking industry in India, has made enormous changes in the past few years and one of their recent initiative is the opening up of small finance banks for unserved and underserved strata of the society. The main objective of opening up small finance bank is for further financial inclusion by provision of savings, supply of credit to small business, farmers, micro and small industries and other unorganised sector through high technology and low-cost operations. Thus, this paper discusses the various aspects of leveraging technology in Small Finance Banks with reference to Ujjivan and AU Small Finance Banks.

**Key words:** Leveraging technology, financial inclusion, small finance banks, etc.



Paper ID: ICRAITMS\_202012\_153

## Dynamic Analysis of Tall Structures Using Response Spectrum Method with different Seismic Zones

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### ABSTRACT:

The main purpose of Seismic Engineering is design and build a framed structure with minimizing the cost and the damage to the structure and its structural elements during seismic protection. ETABS version 16.2 finite element software package is used to perform dynamic analysis of structures surrounded by different seismic zones (II & V) in terms of response spectrum method according to IS 1893:2002(part1) code by using finite element software package ETABS version 16.2.1 used to perform the modeling and analysis of G+30 buildings. In this article, we will investigate the seismic response of dynamic analyzes of skyscrapers with different seismic zones and compare the results of these analyzes in terms of shear: basic, seismic weight, historical drift, historical shear.

**Key Words:** Response spectrum analysis, Base shear, Seismic weight, Storey drifts, Storey shear.



Paper ID: ICRAITMS\_202012\_154

## **PLANING, ANALYSIS AND DESIGN OF RECTANGULAR WATER TANK BY USING STAAD.**

**Pro**

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### **ABSTRACT**

A water tank is a container for storing water. The need for a water tank is as old civilization, to provide storage of water for use in many applications, drinking water, irrigation agricultural, fire suppression, agricultural farming, chemical manufacturing as well as many other uses. An Underground water storage tanks (or sub-surface tanks) are used for underground storage of potable drinking water, wastewater & rainwater collection. And it is a water storage structure constructed below the ground. The term also includes structures that are partially below ground. The paper includes the study of UG Rectangular tank that how the shape deflected and what are the actions will be produced when tank empty or full by using STAAD Pro software.

**Keywords:** IS: 1893 -2002 (PART-2) Liquid Retaining Tanks STAAD. Pro V8



Paper ID: ICRAITMS\_202012\_155

## How A Physicist Tools Help Us To See The World

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Dhulapally, Secunderabad.

### ABSTRACT:

A physicist’s tools have great importance in Science it expands our vision so that we can see beyond the everyday life experiences, and by knowing the history of these tools we can know the history of science. In this review paper I am discussing about five such great physics tools that have ever made in history which gained popularity and recognition to the inventors that even today scientists are achieving breakthroughs in their fields with help of such scientific tools. From the history of the inventors to the modern world application of the tools everything is here about the information of those greatest physics tools.

**Keywords:** Interferometer, spectrometer, LIGO, GM counter, particle accelerator, optical tweezers



Paper ID: ICRAITMS\_202012\_156

## A Review on - “Bio Nano Catalysts -Characterisation and Applications”

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### ABSTRACT

In this paper we are reporting the different methods of synthesis and characterization of gold colloid, silver colloid and Multiwall carbon nanotube based composites and the potential applications. Three types of gold colloids (negative, neutral, positive) were produced by chemical reduction of uric chloride using either sodium citrate or sodium borohydride or diethyl amino pyridine (DMAP) as reducing agents. Silver colloid was produced by reduction of silver nitrate solution. Multiwall Carbon Nanotubes (MWCNT's) based composites are synthesized using solvent casting method. The formation of Au and Ag nanoparticles was confirmed by the appearance of surface Plasmon absorption maxima at 560 and 420 nm for Au and Ag nanoparticles respectively using UV-Visible spectroscopy. All these nano materials and MWCNT based composites are characterized using SEM, TEM, AFM and XRD. XRD analysis of gold and silver colloids revealed all relevant Bragg's reflections corresponding to the FCC crystal structure as given in the JCPDS data for gold and silver colloid. However some new peaks which do not belong to the above structure were also present in the data for both Au and Ag. In this paper we are also reporting the possibility of using Polyvinylidene Fluoride (PVDF)/CNT composite as strain sensors. Different weight percentage (2 Wt%, 3 Wt%, 4 Wt %) of CNT-PVDF polymer Nanocomposite films are prepared and they are characterized using various techniques and reported. The strain and defect measurements using the CNT-PVDF nanocomposite as a novel Non-destructive technique (NDT) is briefly explained.

**Keywords:** Nano silver, Nano gold, CNT-PVDF, Nano composites, characteristic techniques, DE sensor applications



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_157

## Study of Selected Soil Stabilization Material and the Cost Impact

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### ABSTRACT:

The study is centred on the available techniques and procedures of soil stabilization and to keep geotechnical engineers abreast of the cheaper technologies with respect to soil stabilization and a need to do what is best in this field through a review of the most important techniques and additives for the soil. The economic factor represented by the costs aspects is a very important factor in major projects like highway projects. The article reviews the most important soil stabilization methods and the cheapest to select them as cheap and effective materials to increase load resistance at the same time. The study included three types of additives by reviewing the theoretical aspects, the fourth is field study concerned of the highway project by adding the cement residues conducting the laboratory test of the samples taken from the site. The soil was classified according to (AASHTO). The study proved that the addition of cement residues to clayey soil (base layer) improves its stabilization to limited limits. From the economical side of the material used will reduce the cost of soil stabilization by 45 % compared to classical materials.

**Keywords:** soil, soil stabilization, highways, insitu, clayey soil, cost



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## Study of Selected Soil Stabilization Material and the Cost Impact

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### ABSTRACT:

The study is centred on the available techniques and procedures of soil stabilization and to keep geotechnical engineers abreast of the cheaper technologies with respect to soil stabilization and a need to do what is best in this field through a review of the most important techniques and additives for the soil. The economic factor represented by the costs aspects is a very important factor in major projects like highway projects. The article reviews the most important soil stabilization methods and the cheapest to select them as cheap and effective materials to increase load resistance at the same time. The study included three types of additives by reviewing the theoretical aspects, the fourth is field study concerned of the highway project by adding the cement residues conducting the laboratory test of the samples taken from the site. The soil was classified according to (AASHTO). The study proved that the addition of cement residues to clayey soil (base layer) improves its stabilization to limited limits. From the economical side of the material used will reduce the cost of soil stabilization by 45 % compared to classical materials.

**Keywords:** soil, soil stabilization, highways, insitu, clayey soil, cost



Paper ID: ICRAITMS\_202012\_158

## Mathematical Assessment of GMP cells induced Differentiate Myeloid-derived Suppressor Cells of Granulocytes

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### ABSTRACT:

In this paper, we propose a method for communicating Cerebrospinal fluid-receptors and signal transduction that control GMP separation, transform the mechanism into a series of differential equations and explore the characteristics of this mathematical model using nonlinear dynamic theory. Our model reproduces various experimental results on the difference of GMP cells in response to various recommended doses of G-CSF, M-CSF, and CSF-GM. In general, we should reproduce the concentration-dependent nature of the segregation caused by GM-CSF, and introduce a process that induces this activity. We are also researching the differentiation of a fourth phenotype, monocytic myeloid-derived suppressor cells (M-MDSC), showing how much they can fit in the classical GMP differentiation processes and also how progenitor cells could be Conditioned for differentiation with M-MDSC. .

**Keywords:** Monopoiesis, differentiation, cytokines, mathematical modeling, temporal dynamics, effector advanced technologies through mononuclear myeloides.





Paper ID: ICRAITMS\_202012\_162

# COMPARATIVE STUDY OF BLACK COTTON SOIL STABILIZATION USING COPPER SLAG AND FLY ASH FOR PAVEMENT CONSTRUCTION

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## ABSTRACT:

Soil is the basic foundation for any civil engineering structures. It is required to bear the loads without failure. In some places, soil may be weak which cannot resist the oncoming loads. In such cases, soil stabilization is needed. Numerous methods are available in the literature for soil stabilization. But sometimes, some of the methods like chemical stabilization; lime stabilization etc. adversely affects the chemical composition of the soil. In this study, fly ash and copper slag were mixed with Black cotton soil to investigate the relative strength gain in terms of unconfined compression, bearing capacity and compaction. The effect of fly ash and copper slag on the geotechnical characteristics of clay-fly ash and clay-lime mixtures was investigated by conducting standard Proctor compaction tests, unconfined compression tests, CBR tests and permeability test. The tests were performed as per Indian Standard specifications. The black cotton soil used for these experiments was brought from bowrampet village ,near Bachupally, Hyderabad, Telangana. The physical properties of the soil were determined as per IS specifications. Fly ash for the study was brought from Dundigal (Hyderabad). It is finely divided residue resulting from the combustion of ground or powdered coal from electric generating plants. It has high water absorption capacity. Copper slag was brought from SRI SRINIVASA METALIZERS (Phase II, IDA, Cherlapally, HYD) Copper slag is a by-product extracted during the process of smelting. In the process of smelting, the impurities become slag and floated in the top surface of the molten metal which will be quenched in water produces angular granules and disposed as wastes. In this test programmer, without additives clay was tested to find the optimum moisture content, CBR value, plasticity index and unconfined compression strength. Fly ash and Copper slag were added in varying percentages and that fraction for which maximum strength is obtained was found out.

**Key words:** BC Soil, copper slag, fly ash, Compaction, CBR.

Paper ID: ICRAITMS\_202012\_163

## Enhanced Semantic keyword Search over Encrypted Cloud Data

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### ABSTRACT:

With the increasing adoption of cloud computing, a growing number of users outsource their datasets to cloud. To preserve privacy, the datasets are usually encrypted before outsourcing. However, the common practice of encryption makes the effective utilization of the information difficult. For instance, it's difficult to go looking for the given keywords in encrypted datasets. Many schemes are proposed to form encrypted data searchable supported keywords. However, keyword-based search schemes ignore the semantic representation information of users' retrieval, and can't completely meet with users search intention. Therefore, the way to design a content-based search scheme and make semantic search more practical and context-aware could be a difficult challenge. During this paper, we propose ECSED, a unique semantic search scheme supported the concept hierarchy and therefore the semantic relationship between concepts within the encrypted datasets. ECSED uses two cloud servers. One is employed to store the outsourced datasets and return the ranked results to data users. The opposite one is employed to compute the similarity scores between the documents and therefore the query and send the scores to the primary server. To further improve the search efficiency, we utilized a tree-based index structure to arrange all the document index vectors. We employ the multi-keyword ranked search over encrypted cloud data as our basic frame to propose two secure schemes. The experiment results supported the important world datasets show that the scheme is more efficient than previous schemes. We also prove that our schemes are secure under the known ciphertext model and therefore the known background model.

**Index Terms**—Cloud Computing, Semantic Search, Concept Hierarchy



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_164

## Laplace and Inverse Laplace transforms in Relation with Beta and Gamma functions

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**ABSTRACT:** Usually it has been noticed that differential equation is solved in general. The Laplace transformation makes it simple to solve. The Laplace transformation is useful in different areas of science, engineering and technology. The Laplace transformation is relevant in so numerous fields. Here we have applied Laplace transformation in linear ordinary differential equations with constant coefficient and a number of ordinary equations in which the coefficients are variable. Laplace transformation makes it easier to solve the problems in engineering applications and makes differential equations easy to solve. In this paper we will discuss the Laplace transformations and inverse Laplace transformations in relation with beta and gamma function by using convolution theorem.

**Key words:** Laplace transformation, Inverse Laplace transformation, beta function, gamma function.



Paper ID: ICRAITMS\_202012\_165

## **A REVIEW ON NANOPARTICLES CLASSIFICATION, SYNTHESIS AND ITS APPLICATIONS**

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### **ABSTRACT**

Nanotechnology is a relatively new field of research. Nanoparticles are the foundation of nanotechnology. Inorganic nanoparticles, organic nanoparticles, ceramic nanoparticles, and carbon base nanoparticles are among the various types of nanoparticles. The inorganic nanoparticles are graphene, carbon nanofiber and carbon black. Nanoparticles are also classified on the basis of dimension such as one dimension nanoparticles, two-dimension nanoparticles and three-dimension nanoparticles. The nanoparticles are synthesis by top-down and bottom-up. The chemical, physical, and green synthesis of nanoparticles is discussed in this study.

**Keywords:** Nanoparticles, Carbon Nano Tubes, Fullerenes, thermal conductivity, Carbon black.



Paper ID: ICRAITMS\_202012\_166

## **EVALUATION OF DEFINITE INTEGRALS USING BETA AND GAMMA FUNCTIONS**

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### **ABSTRACT:**

In this paper we can study about the introduction of special functions like Beta and Gamma functions and the properties. The main aim of this paper is to evaluate the fractional integral and fractional derivative using general method and by using the special functions Beta and Gamma.

*Key words: Beta function, Gamma function and fractional calculus.*



Paper ID: ICRAITMS\_202012\_167

## **CONSUMER SENSATION OF RURAL POPULATION ON PAYMENT BANKS BEFORE COVID 19**

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### **ABSTRACT**

**Payments banks** are an Indian new replica of banks conceptualized by the Reserve Bank of India (RBI). Payments banks can issue ATM cards or debit cards and provide online or mobile banking. Bharti Airtel set up India's first payments bank. Structures questionnaire has been prepared and collected Primary data from 133 respondents among selected rural areas in Coimbatore district those who are using payment banks. For collecting primary data, survey method and interview survey have adopted. The researcher has used simple percentage analysis, Hendry Garratt Ranking method, Chi – square and ANOVA. The researcher has concludes that normally, city people have using all facilities blindly without think about technological issues because of his busy and emergency reason. On the other hand, the rural population have analyze deeply before using any facility and technology. The researcher suggest the payment bank corporate to widen the security and safety measures to avoid issues due to account hacking and have to take care on spammers and malware etc.,

**Keywords:** Consumer sensation, Digital payment, rural population.



Paper ID: ICRAITMS\_202012\_169

## **A STUDY ON WORK LIFE BALANCE OF WOMEN IN HIGHER EDUCATIONAL INSTITUTIONS**

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### **ABSTRACT**

Increasing literacy levels, living standards, changing social attitudes, and the pursuit of economic independence are considered to increase women's employment. However, it is expected that elements, including family responsibilities, job demands, reduced job autonomy, and increased working hours, will reduce female employment. The education sector is India's largest employer of women and is undergoing rapid changes due to multiple stakeholder demands. This study examines the work-life balance (WLB) status among female non-educational employees at private universities. In addition, work motivations, challenges, job pressure, and their results related to mental and physical health have been studied. The purpose of this research is to highlight the need for teachers teaching at different levels to adopt Work-Life Balance (WLB) policies. The paper examines various elements of the Work-Life Balance, particularly with reference to teachers from government and private institutions. On the basis of empirical evidence, the study suggests that Work-Life Balance and policies for teachers need to be adopted. Data from 100 teachers working for government and private schools, colleges, universities and professional courses were gathered for the study. The findings of the study indicate that Work-Life Balance policies and programs for the teaching community need to be designed to allow them to balance their needs for work and life. Through this study, an attempt was also made to identify various personal motives and priorities among different demographic groups that could become the basis for the development of teacher WLB policies. Our findings showed that through flexible workplace arrangements, higher education cultivates a climate of balance and that support networks are necessary to generate role balancing in and out of the workplace. Finally, time management and organization, irrespective of roles outside the workplace, are necessary for women to establish balance (Eg. spouse, mother, friend).

**KEYWORDS:** Work-life balance, Personal life, Higher education,



Paper ID: ICRAITMS\_202012\_170

## **Examine the teachers’ satisfaction on usages of online teaching Methods**

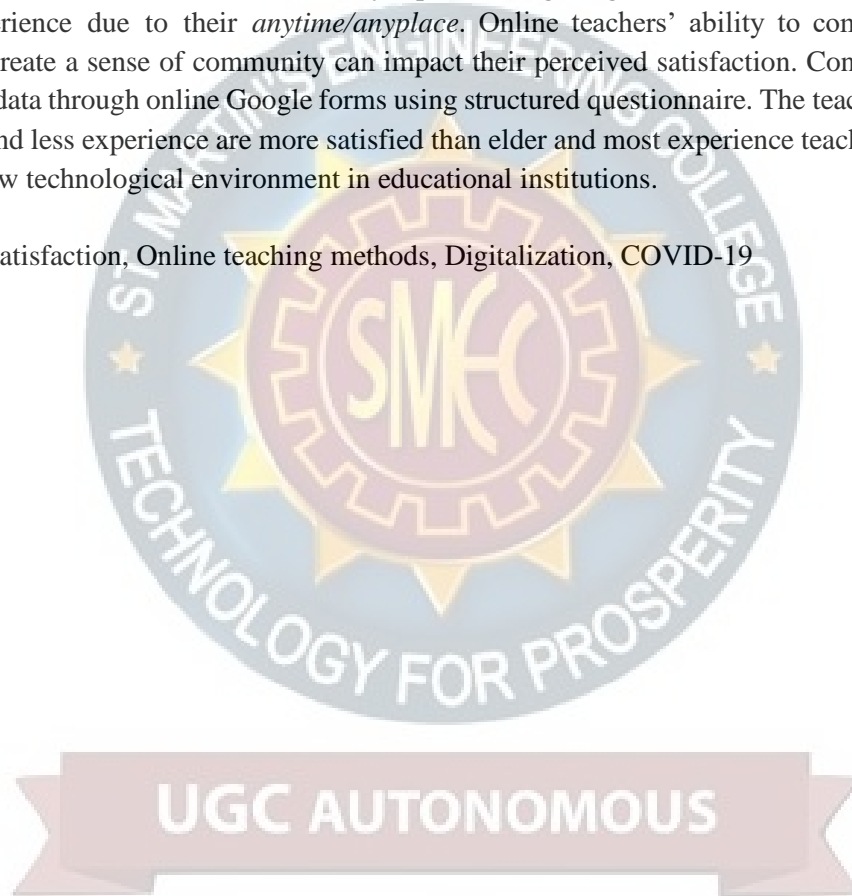
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### **ABSTRACT:**

Outbreak of corona virus disease 2019 (covid-19) in various countries at the end of last year has transferred traditional face-to-face teaching to online education platforms, which directly affects the quality of education. Smith’s (2000) case study reported a high degree of satisfaction with their online teaching experience due to their *anytime/anyplace*. Online teachers’ ability to communicate with students and create a sense of community can impact their perceived satisfaction. Convince sampling and collected data through online Google forms using structured questionnaire. The teachers belongs to younger age and less experience are more satisfied than elder and most experience teachers due lack of adapting to new technological environment in educational institutions.

**Key words:** Satisfaction, Online teaching methods, Digitalization, COVID-19





Paper ID: ICRAITMS\_202012\_172

## **Quantification of Drugs Using Spectroscopic Method By Oxidation with NBS and Amaranth dye couple**

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### **ABSTRACT**

A simple, reliable and selective methods are established for the quantification of drugs viz., Domperidone, Rasagiline, Telmisartan, Terbinafine and Dronedarone in commercial available dosage forms by using N-Bromo Succinimide (NBS) as an oxidising reagent. The suggested methods are indirect and which involves oxidation of selected drugs by NBS followed by determination of left over NBS with the measurement of reduction in absorbance of amaranth dye after permitting the reaction between both drug and a fixed quantity of NBS in acid medium. The absorbance was quantified at 520 nm. Beer's law is heeded in the concentration range of DM 1-7 $\mu$ g/ml, RM 1-7  $\mu$ g/ml, TM 4-28  $\mu$ g/ml, TH 2-14  $\mu$ g/ml, and DND 1-7  $\mu$ g/ml. Under optimum conditions the effect of acid, reagent concentrations and reaction time were studied and developed. The suggested methods were successfully applied in the routine analysis of the drug in pure form as well as commercially available dosage form. The results of quantification of drugs have been validated for precision, accuracy, correlation coefficient, linearity, LOD and LOQ.

**Keywords:** Oxidation, Spectrophotometry, Amaranth dye, Drugs, Quantification, Validation.



Paper ID: ICRAITMS\_202012\_173

## A STUDY ON FINANCIAL LITERACY AMONG ILLITERATES IN RURAL AREAS OF WANAPARTHY DISTRICT IN TELANGANA STATE

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### ABSTRACT

The objective of this study is to measure the financial literacy levels among illiterates in the surrounding rural areas of Wanaparthy district, Telangana by using survey based analysis. To achieve the objective of this study 300 families were selected randomly from the rural areas of Wanaparthy district and the Questionnaire was used to assess the basic financial literacy of them. The achieved data is compared with reported data. It is found that financial literacy in rural area is increasing but at a slower pace due to development over the previous five years however the insurance policy/products is yet to be increased. This paper describes the reasons for increase in financial literacy and suggests suitable recommendations in the area of insurance policy/products to move India into digital financial inclusion through cost-effective, convenient and secure means which bring the unbanked rural households into mainstream of the Indian economy.

**Keywords:** financial literacy, financial decisions, Wanaparthy rural illiterates, Women.



Paper ID: ICRAITMS\_202012\_174

## An Experimental Study on Signal Design Using Webster’s Method

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### ABSTRACT

Signal timing is the technique which traffic engineers use to determine who has the right-of-way at an intersection. Signal timing involves deciding how much green time the traffic lights shall provide at an intersection approach. How long the pedestrian walk signal should be, and many numerous other factors. The design of traffic signal nowadays has become an important factor for major intersections of towns and cities. Traffic signal controls the movement of traffic and not only reduces accidents but enables the road safety users to effectively use the area of road at intersection. Traffic volume studies are conducted to determine the number, movements, and classifications of roadway vehicles at a given location. These data can help to identify critical flow time periods, determine the influence of large vehicles or pedestrians on vehicle traffic flow, or document traffic volume trends. The length of the sampling period depends in the type of count being taken and the intended use of the data recorded. Webster method is a rational approach for signal design. The design is simple and is totally based on formulas laid down by Webster, in this method, the total cycle of the signal is determined which forms a total least delay occurring at signal.

**Keywords** — Signal Design, Webster method, intersections.



Paper ID: ICRAITMS\_202012\_175

## “Financial Strategies for the Small and Medium Enterprises (SME’s) to Survive and Sustain after Covid-19 Pandemic in India”

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### ABSTRACT:

The Indian economy is in a very crucial mode of transformation to the world’s biggest and strong economy. This phase of the economy is significant in the life of Small and Medium Enterprises (SMEs) as the Covid-19 Pandemic has collapsed their future plans. The economic downturn has led to the failure of SMEs in terms of revenues, profits, sales, capital, employment, production, etc., and created an insecure environment. Hence, the SMEs have to be made some important financial decisions and develop innovative tactics to ensure the business survival in the short term and sustain in the long term. They should have to adopt the modified financial strategies instead of existing ones. Apart from financial aspects their relative shortcomings in the production, human resources, technology, supply chain, and logistics should also be tackled in a similar manner to overcome the crisis. This paper studies the impact of the Covid-19 Pandemic on SMEs in India and suggests the financial strategies for them to survive and sustain after the crisis.

**Keywords:** Small and Medium Enterprises (SMEs), Financial Strategies, Covid-19, Pandemic, Crisis, Survive and Sustain etc.



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_177

## Stree Nidhi – A New Strategy for Empowerment of Rural Women in Krishna District

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### ABSTRACT

The Self-Help Group (SHG) is a powerful instrument to empower economically backward women of rural India as the women members under the SHG not only can earn income but they feel empowered also. In the backdrop of microfinance crisis and issues in bank linkage, Stree Nidhi emerged as a specialized institution in the State for financing SHGs with the help of user friendly technology and has earned trust of the community. Stree Nidhi uses the SHG platform for lending and has been supplementing credit flow to SHGs with better systems, community participation, effective monitoring and more importantly with undivided focus. This research article has discussed the how rural women after receiving StreeNidhi loan in Krishna district of Andhra Pradesh were not only earning and contributing to the family but felt empowered also. The study was carried out at Kankipadu and Penamaluru Mandal of Krishna district in February 2021. Some women members of different SHGs were contacted and few individual cases are presented here.

**Keywords:** Empowerment, Rural women, SHG and StreeNidhi.



Paper ID: ICRAITMS\_202012\_178

## **.A STUDY ON REAL NUMBER SYSTEM IN REAL ANALYSIS AND COMPLEX ANALYSIS**

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### **ABSTRACT**

In mathematics real analysis is the branch of mathematical that studies the behavior of real numbers, sequences and series of real numbers and valued functions Some particular properties of real-valued sequences and functions that real analysis studies include convergence, limits, continuity, smoothness, differentiability and inerrability. Real analysis is distinguished from complex analysis, which deals with the study of complex numbers and their functions.



Paper ID: ICRAITMS\_202012\_179

## A Glance at 4D Digital Printing and Its Imminent Future Prospects

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### ABSTRACT

Since its launch, 3D printing has become immensely popular. It applies in fields like prototyping, manufacturing and the medical sector, mostly because of its ability to translate digital 3D files rapidly and cost-effectively into real objects. 3D printing can print fixed structures that are static and not suitable for multifunctional use. In combining polymer composites, 3D printing and 4D printing was designed to work. 4D printing utilizes the fourth dimension of time to form 3D printed objects once exposed to stimuli using the 3D convertible printing technique and laser synchronization (LS). In response to stimuli like pH, moisture and temperature, 4D printed materials can activate 3D imported components without the need for electronics or engines. Much work has been conducted on intelligent materials that are capable of sensing and answering external stimuli. This paper examines 4D prints based on activation stimuli and explores the use of technology. 4D printing aims to simplify the design and production of various products and have the massive potential to create components that are automatically controlled to respond to their setting. 4D printing applications are in Nanocomposite materials, safety, patterned optical surfaces and multiple-directional structures.

**Keywords:** 4D printing, fused deposition modelling, laser synchronization smart materials, stimuli



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_181

## Investigation on Depolarization, Diattenuation and Retardance of wood sample using Imaging Polarimetry Technique

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### ABSTRACT

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This study investigated the optical properties of wood material by Mueller matrix imaging polarimetry. Polarimetry is an indirect optical method in that information about the physical properties of a sample is obtained in the course of modeling analysis. More advanced techniques like Mueller matrix polarimetry is also known as ellipsometry is used to study the complete and accurate characterization of anisotropic samples which occur in many instances, both in research and real life activities. Mueller Matrix Imaging Polarimetry is a powerful imaging technique used to provide high precision measurements for the Mueller matrices at every pixel of an image captured with a detector. The system used acquires 16 Mueller Matrix images and these images are further processed to investigate the polarization properties of the sample under consideration. In this communication the optical system used to acquire the Mueller Matrix Images functioning in reflection frame is described and the resulting polarization properties of the wood sample like Depolarization, *Diattenuation* and Retardance were presented.

Keywords: Mueller matrix, ellipsometry, Polarimetry and polarization



UGC AUTONOMOUS



Paper ID: ICRAITMS\_202012\_182

## **A STUDY ON MARKETING OPPORTUNITIES IN CORPORATE HOSPITALS (With special reference to select hospitals in Visakhapatnam, Andhra Pradesh)**

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### **ABSTRACT:**

The necessity and importance of corporate hospitals is increasing day to day in a developing country like India, where majority of the population is middle class. Unless the government and private enterprises create various marketing schemes, it is difficult for them to meet in an unexpected situation. This paper mainly focuses on innovating new avenues for both patients and hospitals or health care services provided by government for ease of making this delivery process affordable to both the parties.

**Key words:** Marketing opportunities – Health care services – Affordable prices – New business model – changing life styles



Paper ID: ICRAITMS\_202012\_183

## Salt Identification in Seismic Images using Deep Learning

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### ABSTRACT

Computing vision is an interdisciplinary medical area that offers with how computers can be made to gain high-level knowledge from virtual pics or videos. Deep studying has enabled the sphere of computing imaginative and prescient to improve swiftly within the previous few years. One of the responsibilities in computing imaginative and prescient known as as Semantic Segmentation pursuits to label each pixel of an photo with a corresponding elegance of what's being represented. Several areas of Earth with big accumulations of oil and gas additionally have big deposits of salt below the surface. However unfortunately, understanding in which huge salt deposits are precisely may be very hard. Professional seismic imaging nevertheless calls for expert human interpretation of salt bodies. This ends in very subjective, pretty variable renderings. Greater alarmingly, it leads to doubtlessly risky conditions for oil and gasoline organisation drillers. This venture aims to deal with this problem the usage of a selected structure particularly UNET, an quit-to-stop fully convolutional network (FCN) which is used to carry out semantic segmentation on the seismic photographs to become aware of salt deposit places. The information and corresponding mask are loaded into the device and then passed to the UNET which identifies functions from the pics using successive convolution and pooling layers also correspondingly down sampling it after which up samples the feature vector the usage of transposed convolutions to reconstruct the unique picture. After the UNET is skilled the sort of seismic photo can be passed and the model will delineate the region where salt is gift.

**Keywords:** Seismic, UNET, Fully Convolutional Network.

UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_185

## PLANNING, ANALYSIS AND DESIGN OF DUPLEX HOUSE USING AUTOCAD AND STAAD.PRO

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### ABSTRACT

The aim of our work is to design the given DUPLEX HOUSE according to Indian Standard codes. The design of a building can be done manually or with the help of Software We have selected to do our project with Software because designing manually consumes a lot of time, effort and can contain mistakes whereas by using software we can save time and obtain results without errors. Now a days there are several software's are available in market for analysis and design of “Civil Engineering Structures” like ETABS, STAAD Pro and STRUDS etc., At present work we used software named “STAAD Pro” abbreviated as “Structural Analysis And Design”. By using the software is that it is user friendly and has exceptional features like it designs the structural components individually along with their Analysis and Results. Additional useful feature of this software is that we can view the Shear force, Bending moment, Torsion diagrams at each level of the building.

**Keywords:** Shear Force, Bending Moment, Deflection, Slabs, Beams, Columns, Footings, STAAD.Pro, Auto-Cad



Paper ID: ICRAITMS\_202012\_185

## EXPERIMENTAL INVESTIGATION ON MACHINING PARAMETERS BY USING WIRE-EDM PROCESS ON AL ALLOYS

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### ABSTRACT

The objective is to investigate experimentally the behaviour of different machining parameters in electrical discharge machining (EDM) process with a CNC WIRE EDM using Aluminium Alloys of Al-2014 & Al-6082. The feasibility of machining Al-2014 & Al-6082 with a CNC wire cut was studied and its effect on EDM performance was compared experimentally using a CNC Wire cut. The high performance of the machining process with a CNC wire cut by through the use of CNC WIRE EDM machine to efficiently remove material from the work piece & electrode through the improved ability to apply a higher peak current. The relationship between two machining performance parameters such as material removal rate, surface roughness and three machining parameters such as feed rate (m/min), servo voltage and speed is established. The main effects and influences of the two factors (material removal rate, surface roughness) interactions of these parameters on the performances of the EDM process with the CNC Wire Cut are discussed.

**Keywords:** Electrical Discharge Machining (EDM), Material Removal Rate (MRR), Surface Roughness(SR), Process Parameters, Cutting Rate.

UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_187

## Human Resources Planning in Organization

T.Nikhila

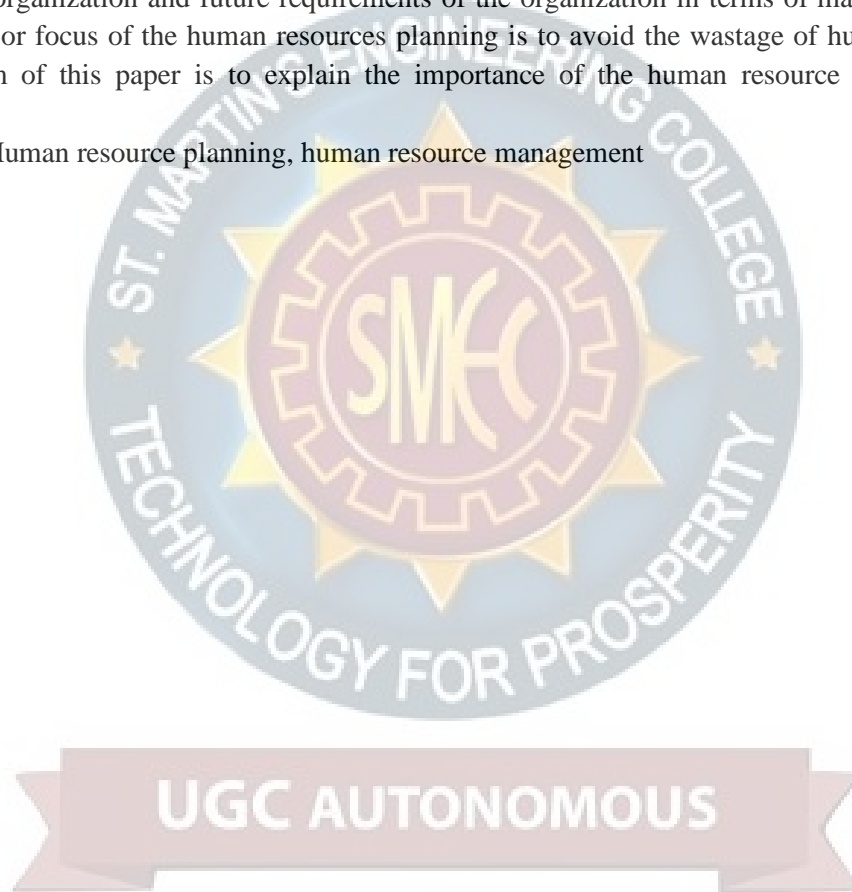
St. Martin's engineering college, Department of S&H, nikhilataduri7@gmail.com

### ABSTRACT

The Human Resource Management (HRM) process is combination of following steps: human resource planning, recruitment, selection, employee development, performance appraisal, and compensation. The first and foremost step in Human resource management is Human Resource Planning (HRP) involves.

Human resource planning process gives a clear picture about the position of presently available man power in the organization and future requirements of the organization in terms of manpower in long term. The major focus of the human resources planning is to avoid the wastage of human resources. The main aim of this paper is to explain the importance of the human resource planning in an organization.

**Key words:** Human resource planning, human resource management



Paper ID: ICRAITMS\_202012\_189

## EXPERIMENTAL INVESTIGATION ON MACHINING PARAMETERS BY USING WIRE-EDM PROCESS ON AL ALLOYS

<sup>1</sup>S P KRISHNA MITHRA, <sup>2</sup>N TULASI RAM, <sup>3</sup>M SRINIVASA REDDY, <sup>4</sup>T L P KUMAR, <sup>5</sup>T SUBBA REDDY

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### ABSTRACT

The objective is to investigate experimentally the behaviour of different machining parameters in electrical discharge machining (EDM) process with a CNC WIRE EDM using Aluminium Alloys of Al-2014 & Al-6082. The feasibility of machining Al-2014 & Al-6082 with a CNC wire cut was studied and its effect on EDM performance was compared experimentally using a CNC Wire cut. The high performance of the machining process with a CNC wire cut by through the use of CNC WIRE EDM machine to efficiently remove material from the work piece & electrode through the improved ability to apply a higher peak current. The relationship between two machining performance parameters such as material removal rate, surface roughness and three machining parameters such as feed rate (m/min), servo voltage and speed is established. The main effects and influences of the two factors (material removal rate, surface roughness) interactions of these parameters on the performances of the EDM process with the CNC Wire Cut are discussed.

**Keywords:** Electrical Discharge Machining (EDM), Material Removal Rate (MRR), Surface Roughness(SR), Process Parameters, Cutting Rate.



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_189

## Impact of Macroeconomic Factors on Money Supply

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### ABSTRACT

This paper surveys the impact and ramifications of Macro financial factors on Money supply (M2), utilizing got optional information gotten from the RBI measurable Bulleting (2021). Combined with the use of econometric method, for example, O.L.S., causality test and Co-combination of time arrangement information to assess the

long and short run relationship and causality of utilized factors. The outcomes uncovered that all factors were fixed at different slacks and there exists a since quite a while ago run connections between factors utilized and it was found that separated from swelling having a reverse importance with Money supply (M2) and Exchange Rate (EXR), any remaining factors like Gross Domestic Product (GDP) were found to decidedly affect Money Supply. It was subsequently suggested that India Banks ought to be focused on the mission of value strength just as improving the administrative and administrative structures to get a solid monetary area for productive intermediation in other to evade the inflationary effects government should control the exorbitant extension in wide cash supply in India

Key words: Money supply, Inflation, GDP, Exchange Rate



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_191

## An Empirical Study of Investment Patterns and Behavior in the Hyderabad Metropolitan Area

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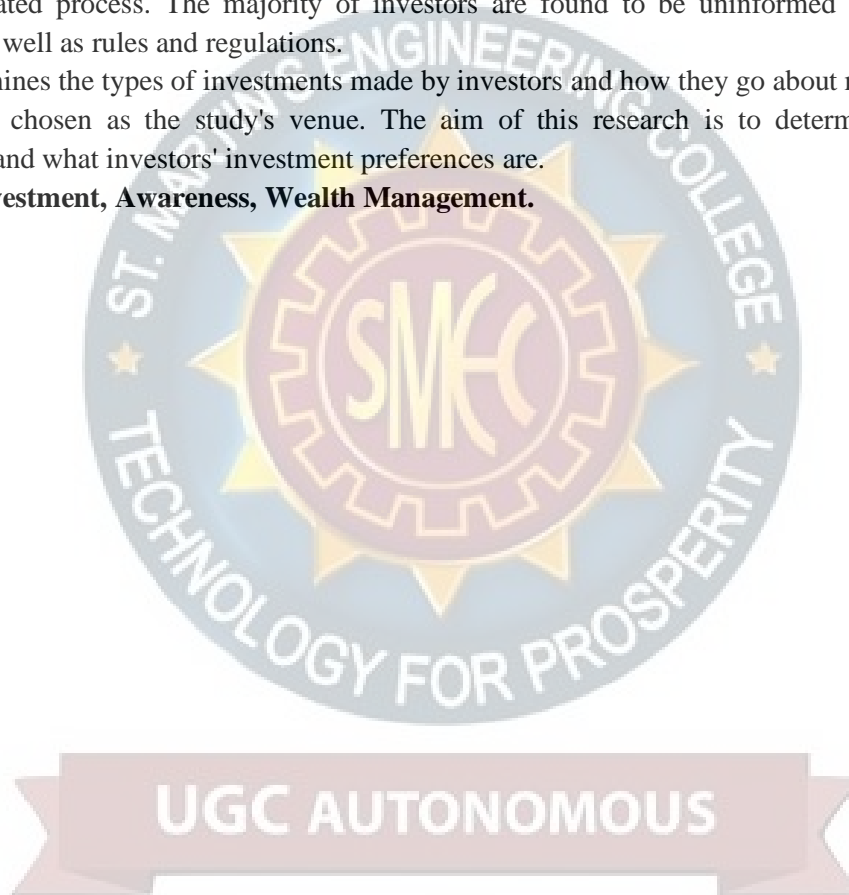
### ABSTRACT:

Because of the large number of savings and investment firms and products they sell, the terms and conditions of the investment, and the prevalent complex rules and regulations, investing capital has become a very complicated process. The majority of investors are found to be uninformed about investment opportunities as well as rules and regulations.

This paper examines the types of investments made by investors and how they go about making them.

Hyderabad was chosen as the study's venue. The aim of this research is to determine what wealth management is and what investors' investment preferences are.

**Key words:** Investment, Awareness, Wealth Management.





Paper ID: ICRAITMS\_202012\_192

## **A Wavelet Study of the performance of financial markets between China, India, US and UK**

A.Sarveswara Reddy<sup>1</sup>,Sathish<sup>2</sup>

### **ABSTRACT:**

The main objective of this analysis is to show the correlated between China, India, the US and the UK financial markets. A Wavelet Coherence is used to demonstrate the strength of relationships established across the Global Financial Meltdown (GFM) and during the COVID-19 pandemic between selected markets. The date of study varies from August 2000 to June 2020. The study's outcome indicates that the frequency of the relationship between the markets chosen varies. In comparison with China, India's stock market was heavily integrated into developed world markets, especially during the GFM and COVID-19 periods. Related to GFM during the recent COVID-19 recession, the US market continues to dominate the Indian financial markets. Knowing the significance of the relationship established over time between markets gives investors the incentives to cautiously define their diversification of portfolios strategies.

**Keywords:** Financial markets, correlated, recession, diversification of portfolios



Paper ID: ICRAITMS\_202012\_194

## **Impact of employee’s gender on their perceptions towards organisational changes with respect to IT Industry at Hyderabad**

**Dr.P.Siva Prasad\*, K.Sandeep Reddy\*\***

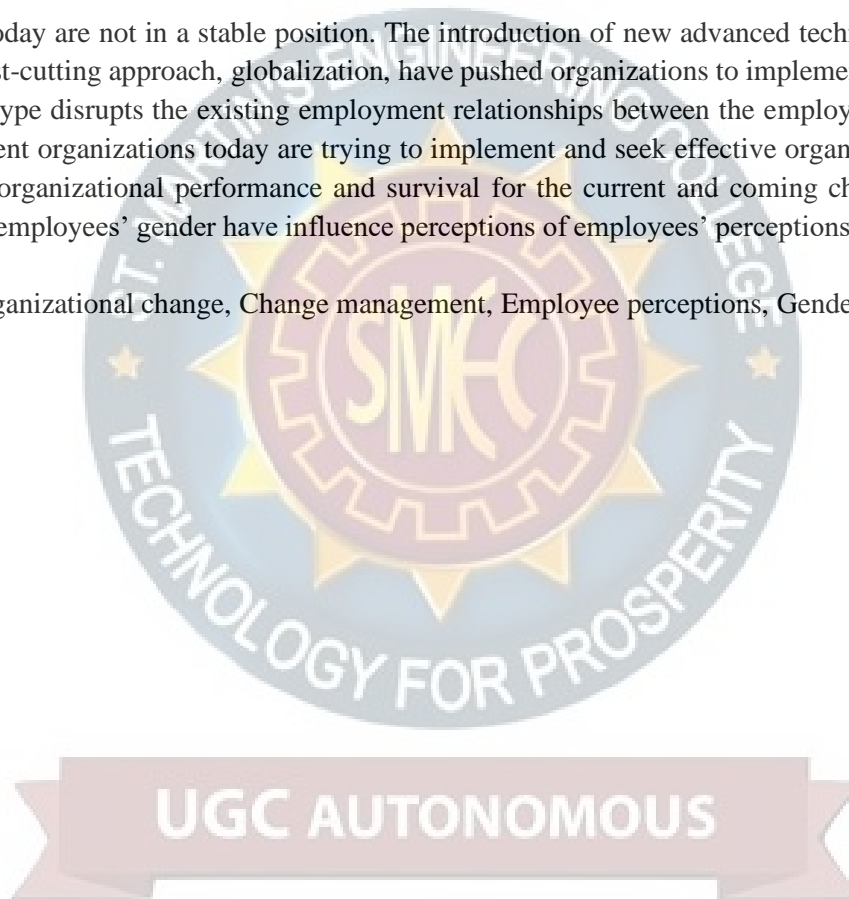
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\*\*K.Sandeep Reddy, Assistant professor, Dept. of MBA,Gurunanak Institute of Technology, sandeepkasireddy@gmail.com

### **ABSTRACT:**

Organizations today are not in a stable position. The introduction of new advanced technology, increased competition, cost-cutting approach, globalization, have pushed organizations to implement major changes. Change of any type disrupts the existing employment relationships between the employer and employee. To a certain extent organizations today are trying to implement and seek effective organizational changes to stabilize the organizational performance and survival for the current and coming challenges. Present study finds that employees’ gender have influence perceptions of employees’ perceptions of organizational changes.

**Key words:** Organizational change, Change management, Employee perceptions, Gender,



Paper ID: ICRAITMS\_202012\_195

## TEACHING ENGLISH FOR SUSTAINABLE DEVELOPMENT AS THE PRIME FACTOR

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### ABSTRACT:

English for sustainability is an important element in the current curriculum which is directly interlinked with education and English Language Teaching. Good communication skills are indispensable for the success of any individual to advance one's career. As the students come from diverse cultures, backgrounds and economic conditions the teacher's desire for excellence in communication is at a stake. Hence the language teacher needs to apply diverse strategies for diverse learners keeping in view the term sustainability as the prime factor to connect the world around us by strengthening the impact of English language teaching.

I personally feel that the methods, approaches we use in our language labs by developing different lesson plans, assessment tools should meet the tough selection process that includes interaction, student participation activities, natural area settings, analyzing, interpreting the data, reporting the real life scenarios that are tangible would contribute to sustainability. The teaching strategies and the ways in which we teach these young experts should meet the next generation to interact with corporations and grow conversant with environmental responsibility from an early age.

**Key words:** Indispensable, Emerging ideas, Desire, Excellence, Success, Assessment Tools, Selection process, Tangible, Conversant, Responsibility.



Paper ID: ICRAITMS\_202012\_195

## Optimization of allocation using Triangular Fuzzy Numbers

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### ABSTRACT

Optimization used in the field of advertising channels to optimally allocate between the media for advertising the product, several types of audience with various factors like age, annual income, gender are identified. Goal of the media selection is not to fix the budget, but to minimize the effective exposure for each of the characteristics chosen under consideration. Used Yager's approach to optimize the problem for triangular fuzzy numbers.

**Keywords and Phrases:** Ranking function, Media selection, Fuzzy solution, Triangular fuzzy numbers.



Paper ID: ICRAITMS\_202012\_196

## Legal Framework of Renewable Energy Sector in India

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### ABSTRACT

Energy is the brilliant string that associates monetary development, expanded social value, and a climate that permits the world to flourish. Despite the fact that the Renewable energy in India as an area is as yet immature, the Government of India has been putting forth cognizant attempts to concentrate in this area. In 1982, a different Department of Non-Conventional Energy Sources (DNES) was made in the Ministry of Energy to care for new and sustainable power. A different Ministry of Non-Conventional Energy Sources (MNES) in 1992 was framed and in 2006 a different Ministry of New and Renewable Energy (MNRE) was set up. India has been making a consistent move to sustainable power. In the year 2019-20, India's outflows of emission diminished firstly in last forty years. This fall has been ascribed somewhat to the Indian government's attention on environmentally friendly power and because of the lockdown estimates taken considering the COVID-19 pandemic. But it is bad luck that yet there is not any specific law to regulate the renewable energy sector in India. Therefore, this research paper is an endeavor to highlight the legal framework of renewable energy sector in India.

**Keywords:** Energy, Framework, Renewable.



Paper ID: ICRAITMS\_202012\_197

## The Subtle Beast: A Case Report on Identifying Borderline Tendencies

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### ABSTRACT:

The present case study report discusses the life history of the subject for identifying the causes & symptoms of borderline tendencies. This case study defines the underlining causes behind the development of such faulty patterns of behavior and emotional instability in the subject. Thirty one year old male from middle class family background during the therapy was diagnosed with perceived abandonment issues, emotional instability & unstable relationships. He showed signs of intense anger outbursts & even paranoid ideations. The major causes behind the development of such personality issues were invalidating family environment, lack of social support & unresolved sexual conflicts. The suggested treatment process was based on Dialectical Behavioral Therapy (DBT).

**Keywords:** Borderline Personality Disorder, BPD, Abandonment crisis, Emotional Instability, Dialectical Behavior Therapy, Paranoid Ideation



Paper ID: ICRAITMS\_202012\_198

## Statistical observation of data variability: A case study of a statistical distribution on a model data

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### ABSTRACT

An attempt has been made on a model data simulated in a statistical environment to attain the knowledge of statistical behavior of the data. The paper deals with statistical visualization data variability. The various techniques of distribution functions applied on the data set reveal statistical abnormality or statistical deviations in order to get a proper scientific interpretation in the executed experiments. The detection of outliers can be possible through statistical approaches to verify the statistical reliability through visualization and computation in statistical plotting and calculations. A detailed analysis is attempted on the model data to get the knowledge of statistical nature of information in the process of experimentation.

**Keywords:** Statical distribution; Outliers; Data validation; Statistical evaluation



Paper ID: ICRAITMS\_202012\_199

## IOT BASED FOREST FIRE DETECTION SYSTEM

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\*Department of Information Technology, Anna University, Chennai,India.

\*\* Department of Information Technology, Anna University, Chennai, India..

### ABSTRACT

Forest fires/ Woods fires are one of issues that compromise supportability of the backwoods. Early counteraction framework for signs of timberland fires is totally vital. The degree of the timberland to be one of the issues experienced in the woodland condition observing. To beat the issues of woods degree, planned an arrangement of woodland fire discovery framework by embracing the Wireless Sensor Network (WSN) utilizing various sensor hubs. Every sensor hub has a microcontroller, transmitter/collector and three sensors. Estimation strategy is performed by estimating the temperature, fire and water level and alarm through RF correspondence.

**KEYWORDS:** FOREST FIRE , FIRE DETECTION , WSN





Paper ID: ICRAITMS\_202012\_200

## EXPERIMENTAL AND COMPUTATIONAL INVESTIGATION OF HEAT SINKS BY USING ANSYS

M. Saikumar<sup>1</sup>, Dr. k.krishna,<sup>2</sup> Dr. D. Maneiah, Dr. M. Ahmed Ali Baig<sup>4</sup>

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<sup>2</sup> Dr. K. Krishna, Associate Professor, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

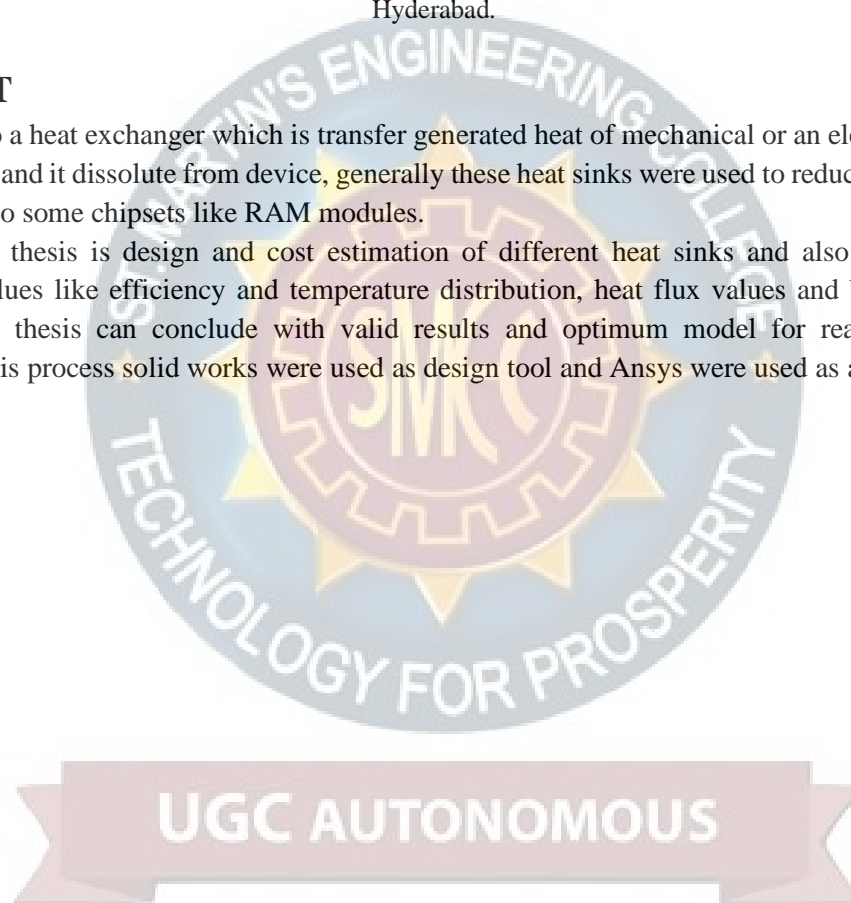
<sup>3</sup> Dr. D. Maneiah, Professor, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

<sup>4</sup> Dr. M. Ahmed Ali Baig, Professor, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

### ABSTRACT

Heat sink is also a heat exchanger which is transfer generated heat of mechanical or an electronic device to a fluid medium, and it dissolute from device, generally these heat sinks were used to reduce the temperature of CPUs and also some chipsets like RAM modules.

The aim of the thesis is design and cost estimation of different heat sinks and also calculating their performance values like efficiency and temperature distribution, heat flux values and by calculating all required results thesis can conclude with valid results and optimum model for real time boundary conditions, in this process solid works were used as design tool and Ansys were used as analyzing tool,



Paper ID: ICRAITMS\_202012\_201

## FLUID ANALYSIS ON ENGINE CYLINDER FINS OF VARYING GEOMETRY AND MATERIALS

M. Karnakar<sup>1</sup>, D. Nageswararao<sup>2</sup>, Dr. D. Maneiah<sup>3</sup>, K. Ratna Kumari<sup>4</sup>

<sup>1</sup> M. Karnakar, M.Tech, student, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

<sup>2</sup> D. Nageswararao, Assistant Professor, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

<sup>3</sup> Dr.D.Maneiah, Professor, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

<sup>4</sup> K. Ratna Kumari, Associate Professor, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

### ABSTRACT

In an inside burning motor, the chamber head (regularly casually condensed to simply head) sits over the chambers on top of the chamber block. It shut in the highest point of the chamber, framing the burning chamber. This joint is fixed by a head gasket. In many motors, the head additionally gives space to the entries that feed air and fuel to the chamber, and that permit the fumes to get away. The head can likewise be a spot to mount the valves, sparkle attachments, and fuel injectors.

In this thesis 3 different types of boundary conditions (static, thermal, flow) were applied and calculated results like deformation, stress, strain, safety factor, total temperature distribution, heat flux values, after calculating all these results finally thesis can concluded with optimum fins shape and their materials with suitable graphs and table



Paper ID: ICRAITMS\_202012\_202

# OPTIMIZATION AND COMPUTATIONAL FLUID ANALYSIS OF DOUBLE PIPE HEAT EXCHANGER USING ANSYS

K. Umakanth<sup>1</sup>, K. Ratna kumari,<sup>2</sup> Dr. A. Raji Reddy<sup>3</sup>, Dr. D. Maneiah<sup>4</sup>

<sup>1</sup>K. Umakanth, M. Tech, student, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

<sup>2</sup> K. Ratnakumari, Associate Professor, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

<sup>3</sup>Dr. A. Raji Reddy, Professor, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

<sup>4</sup>Dr. D. Maneiah, Professor, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

## ABSTRACT

Heat exchangers are gadgets used to move heat energy starting with one liquid then onto the next. The temperatures of the two liquids may change while moving through the exchanger. The energy moved between the streams brings about an adjustment in temperature of every liquid stream if neither one of the fluids is going through a stage change. Because of the progressive change in the temperature levels in an exchanger, the temperature contrast across the warmth move boundary fluctuate over the length of the exchanger. There are additionally financial contemplations which incorporate as starting expense of the exchangers, essential space, and required existence of the unit and simplicity of upkeep. Twofold line heat exchangers are the easiest recovers where warmth is moved from the hot liquid to the chilly liquid through an isolating round and hollow divider. It comprises of concentric lines isolated by mechanical terminations. Modest, rough and effectively kept up, they are essentially adjusted to high temperature, high-pressure applications because of their generally little measurements. The primary point of the current examination is to contemplate the temperature conduct of Nanoliquids in a twofold line heat exchanger. The Nano liquids have higher estimations of warm conductivity than those of the unadulterated fluids and more prominent potential for heat move improvement. Thermo-actual properties of the Nano liquids (warm conductivity, thickness, all the examinations of Nano-liquids are to be completed in the volume fixations going from 0.5–2.0% and at various Reynolds numbers. by utilizing creep instrument (creo-2.0) model were planned then after imported in to cae apparatus (Ansys workbench) to figure the outcomes for each model with various Reynolds numbers at various level of particles.

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Paper ID: ICRAITMS\_202012\_203

## CFD ANALYSIS OF STEAM TURBINE BY USING 2 DIFFERENT NACA SERIES BLADES

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<sup>2</sup>Dr. D. Maneiah, Professor, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

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<sup>4</sup>Dr. A. Raji Reddy, Professor, Department of Mechanical Engineering, CMR Technical Campus, Hyderabad.

### ABSTRACT

Steam turbines play a vital role in power generation as a prime mover which converts kinetic energy of steam into mechanical energy. The turbine consists of several stages with each stage consisting of a stationary blade and a rotating blade. CFD study was carried out for evaluating the performance of a utility Steam Turbine. The flow in a turbine blade passage is complex and involves understanding of energy conversion in three dimensional geometries.

The performance of turbine depends on efficient energy conversion and analyzing the flow path behavior in the various components of Steam Turbine. The CFD analysis of the turbine flow path helps in analyzing the flow and performance parameters and their effects on performance parameters like temperature, pressure and velocity and power values. Turbine blade and rotor assembly is the key to the turbine to convert pressurized steam in to rotary motion; temperature and pressures are directly effects the surface of the blades these will cause regular maintenance replacement of blades.

The aim of the project work is to reduce maintenance and improving quality / life. Initially literature survey was done to understand rectification methodology and approach to select suitable materials and also to select aero -foil shape. 3D models of blades set's shaft were prepared according to data collected from NACA 4412, NACA 6515 series assembly of shaft and blades are modeled in 3D modelling software and CFD analysis were carried out to improve the overall efficiency by studying the flow behavior properties



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_204

## **A Study on Impact of Employee Engagement Practices on Employee Attrition in corporate Hospitals of Hyderabad and Secunderabad.**

**K. Sandeep Reddy**, Research Scholar, Bharathidasan University (TN) and Assistant Professor, Guru Nanak Institutions Technical Campus, Hyderabad.

**Dr.Siva Prasad**, Associate Professor, St. Martin’s Engineering College, Secunderabad

**Dr.N.Srinivas Kumar**, Professor, Assistant Director, Guru Nanak Institutions Technical Campus, Hyderabad

### **ABSTRACT**

As far as work environment is concerned Employee Engagement is continues and ongoing process. This research paper explores the impact of Employee Engagement practices on Employee Attrition in Corporate Hospitals of Hyderabad and Secunderabad. The Quantitative research approach was adopted with 250 completed responses. The findings reveals that there are several practices show its impact on Employee Attrition are Lack of Employee benefit schemes, Lack of Emphasis on health and wellness, Job security, Poor work culture, Lack of Recognition, Lack of Support, Lack of Growth prospects, Lack of Respect, Lack of commitment and Grievances left unresolved. These are some of the major factors which are highly impacting on Employee Attrition in corporate Hospitals. These factors also remained as Crises to Employee Engagement. It is important to bring in more effective employee Engagement practices in corporate hospitals to control Employee Attrition.

If Employees are made highly engaged in what they are doing, then there will be more productivity in quality of work. Many factors in the Organization can make employee emotionally committed to meet Organizational goals. Researcher have chosen Corporate Hospitals of Hyderabad and Secunderabad for the study, to know the Employee Engagement Practices in hospitals and to study their impact on Employee Attrition, to suggest means and ways to improve Employee Engagement levels in the healthcare industry being researched.

**Keywords:** Employee engagement, Employee Attrition, Job security, Poor work culture, Lack of Recognition, Lack of Support, Lack of Growth prospects, Lack of Respect, Lack of commitment and Grievances left unresolved.

UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_208

## Impact of ICT on Women Entrepreneurs: A Literature Review

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2. Sudheesh Sugathan\*
3. Vamshi Bandar,\*

Department of Mater Business Administration, telangana, hyderabad

### ABSTRACT:

Women entrepreneurs are important contributors to Indian economy. At the same time, institutional and systemic barriers, gender inequalities, as well as socio-cultural norms and practices are creating problems for women entrepreneurs for easy access to finance, physical mobility, access to get education, and to improve their skills. Information and Communication Technology (ICT) can help to overcome some of them, and there are also business opportunities in the ICT sector itself. In today's competitive world the survival of many business organizations are largely depending on the effective and efficient use of ICTs.

ICT tools are helping women entrepreneurs with unique and vast opportunities to empower themselves in multifarious way. In this paper, we review the literature on the impact of ICT and empowerment of women, focusing on case studies on how ICTs had been implemented successfully by women entrepreneurs.

**Keywords:** Women entrepreneurs, Empowerment, ICT, ICT tools.



Paper ID: ICRAITMS\_202012\_209

# **LIFE SKILL EDUCATION AMONG DALIT AND NON-DALIT CHILDREN IN ODISHA: A SOCIOLOGICAL ANALYSIS**

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## **ABSTRACT**

Education equips the individuals with skill and knowledge for livelihood as well as societal transformation. The formal education promotes social cohesion while on the other it perpetuates inequalities. Keeping the view of theme of life skill education, the objective of the study is to understand and examine the life skill education of Dalit and Non-Dalit children across gender in the study area. Though this study describes and explores the idea of life skill education of the dalit and non-dalit children in micro level, thus it focuses the descriptive and explorative research design of the study. It is a primary based research study. The researcher did this study in the area of Podamarai village Panchayat of Mahanga block of Cuttack district of Odisha. Education is not confined within the class room but a strong and dynamic influence prevails between the individual and social environment comprising of family and school primarily. The important aspects such as educational attainment, ‘parental involvement’ develop the life skill education of a child.

*Keywords: Life Skill Education, Dalit, Non-Dalit, and Parental Involvement*



Paper ID: ICRAITMS\_202012\_210

## **A Study on the Role of Blockchain Technology in Financial Sector**

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### **ABSTRACT**

The block chain technology is a decentralized ledger that keeps a record of transactions that takes region throughout a peer-to-peer community. This era lets in participants from throughout the network to confirm their transaction without the need for a government; this consists of money transactions, vote casting, and settling trades and plenty of more. The block chain is one of the hottest and fastest growing abilities within the IT region nowadays. It is stated that there are round 44% of groups which have adopted block chain globally. We all recognize that this technology has taken quite a turn inside the enterprise given its reputation in offering secure and secured on line transactions. This technology is already the talk of the tech global. Even though it is a complicated era, most individuals and agencies have commenced adopting block chain because of the many blessings it gives to the enterprise nowadays. Other than the economic region, it has won a variety of attention within the other industries as properly. Block chain is considered by many to be a disruptive core generation. Although many researchers have found out the importance of block chain, the research of block chain is still in its infancy. Now the prevailing study specializes in the information of block chain technology and its role in financial services sector.

Keywords: Block chain, decentralization, global, transactions, disruptive, financial services etc.



**UGC AUTONOMOUS**



Paper ID: ICRAITMS\_202012\_212

## FEATURES AND APPLICATIONS OF PYTHON PROGRAMMING LANGUAGE: A REVIEW

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### ABSTRACT

Python is a modern and general purpose object oriented programming language which is used interpreter for line by line execution. In 1989 Guido Van Rossum developed python with standard libraries. It is a free and open source which can help the beginners to learn python easily. Python is a multi-paradigm program to develop scripting, scraping and creating data sets. In this paper reviewed the features and applications of python programming language.

**Keywords:** Object Oriented Languages, Applications, Interpreter, Open source



Paper ID: ICRAITMS\_202012\_213

## **Exploring the Trend in Household Consumption Expenditure on Energy in Rural India, 2005-12**

**Corresponding Author : Dr DyutiSinha,**

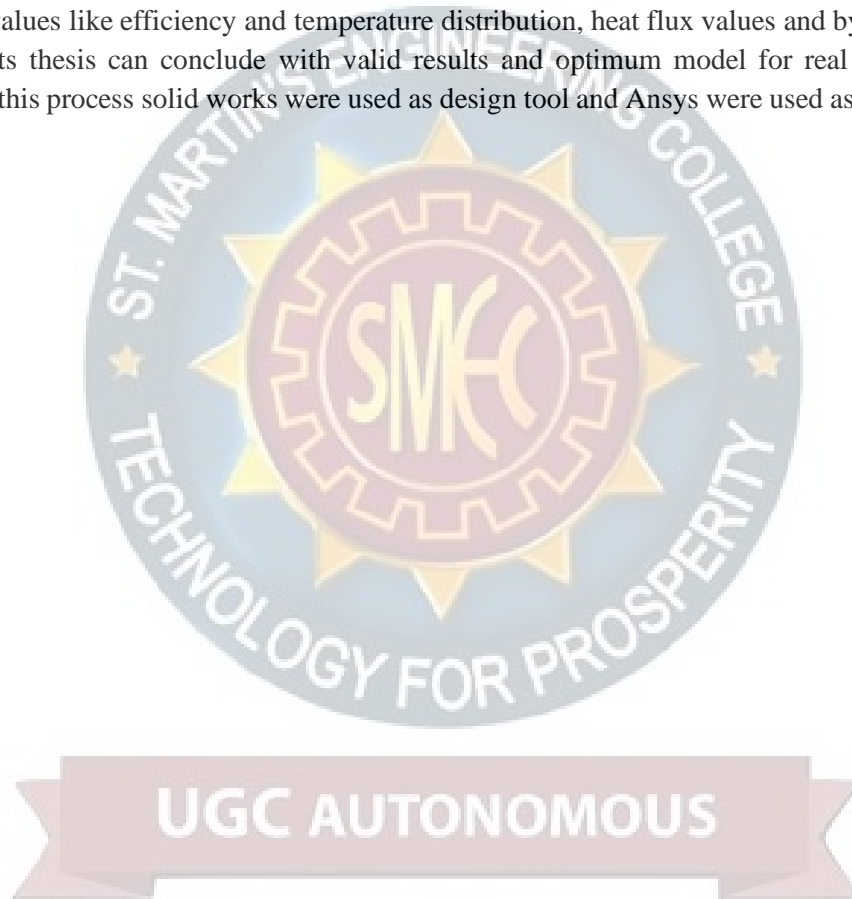
Faculty (Economics), The Bhawanipur Education Society College, Kolkata

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### **ABSTRACT**

Heat sink is also a heat exchanger which is transfer generated heat of mechanical or an electronic device to a fluid medium, and it dissolute from device, generally these heat sinks were used to reduce the temperature of CPUs and also some chipsets like RAM modules.

The aim of the thesis is design and cost estimation of different heat sinks and also calculating their performance values like efficiency and temperature distribution, heat flux values and by calculating all required results thesis can conclude with valid results and optimum model for real time boundary conditions, in this process solid works were used as design tool and Ansys were used as analyzing tool,



Paper ID: ICRAITMS\_202012\_218

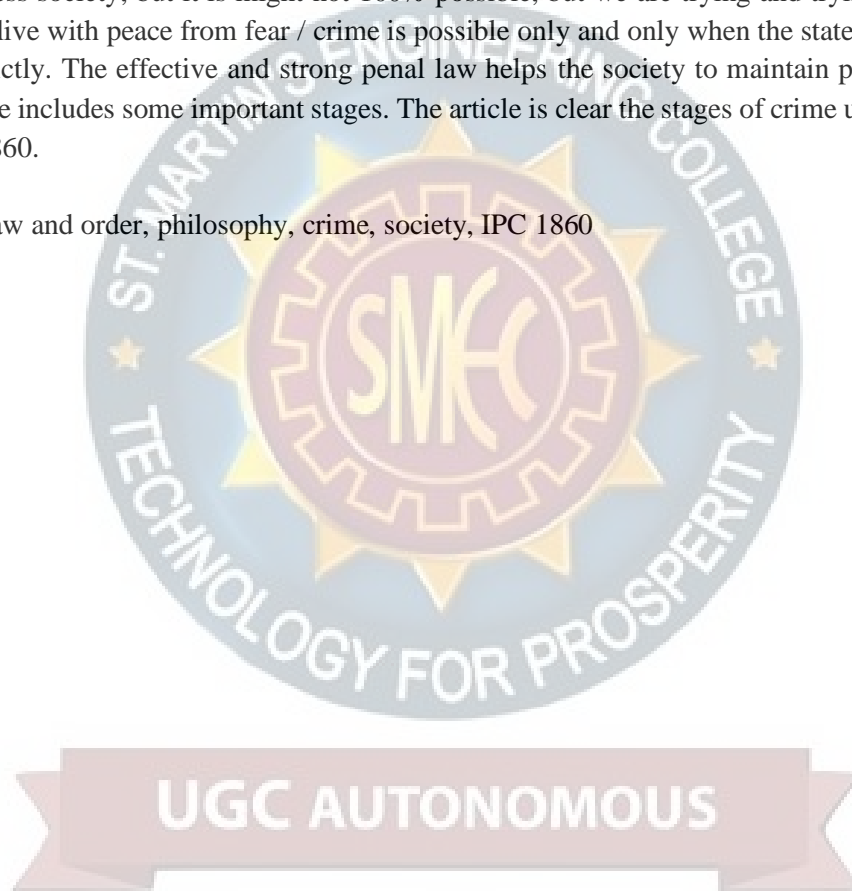
## **STAGES OF CRIME UNDER THE INDIAN PENAL CODE 1860**

**Mridula, Sravani sirra, Mrs D. Krishna priya**

### **ABSTRACT:**

In India, every human must survive and obey the Law and Order. The classification of the society as per Religion, Cast, Sex, Birth Place, Age, Languages etc. Indian civilization is the one of the few oldest civilization in the world. India is very rich as per culture, philosophy, religious, social, humanity and languages. It is clear that we need society in peaceful environment and for that we have to control the crime means we have to prevent the crime and criminal for the betterment of society. We always want to see crime less society, but it is might not 100% possible, but we are trying and trying for reducing the crime. To live with peace from fear / crime is possible only and only when the state makes law and order very strictly. The effective and strong penal law helps the society to maintain peace and order. The term crime includes some important stages. The article is clear the stages of crime under the Indian Penal Code 1860.

**Key words:** law and order, philosophy, crime, society, IPC 1860



Paper ID: ICRAITMS\_202012\_219

## A CASE STUDY ON CANARA BANK

B Ashwitha, Bhargavi, Mrs. B Mounika

### ABSTRACT

In a modern economy, a well-functioning financial system is crucial & banks play a vital role for a country's economy & for the society. Public Sector banks are at the frontline for generating revenues from rural areas & expanding financial services even in the most backward areas of the country. The present study focuses on analysing the performance & growth of Canara Bank over the last five years & to compare its performance with the other Public Sector Banks. Several parameters like Operating Profit, Net Profit/ Net Loss, Net NPA ratio, Capital Adequacy ratio & Advances has been chosen to analyse its performance & growth. Doctrinal Research Methodology has been employed to carry out the research with the help of secondary sources of data, especially from the annual reports of Canara Bank. The present study also discusses the recent merger of Syndicate Bank with Canara Bank & its effects. Accordingly, conclusions have been drawn and suggestion have been made.

**KEYWORDS:** Canara bank, financial system, public sector banks.



Paper ID: ICRAITMS\_202012\_067

## Impact of Back Surface Field and Passivation Layer on the Performance of the Crystalline Silicon/Hydrogenated Amorphous Silicon Heterojunction Solar Cells

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### Abstract

This paper presents the effect of back surface field and passivation layer on the performance of c-Si/a-Si:H heterojunction solar cells by simulation. The c-Si/a-Si:H heterojunction solar cells have been successfully designed and evaluated by AFORS-HET simulation tool. The best values of open circuit voltage ( $V_{oc}$ ) (760.8 mV), short circuit current density ( $J_{sc}$ ) (36.97 mA/cm<sup>2</sup>), fill factor ( $FF$ ) (85.92%) and efficiency ( $\eta$ ) (24.17%) were obtained for Ag/a-Si:H(n)/a-Si:H(i)/c-Si(n)/a-Si:H(i)/a-Si:H(p)/ITO/Ag (*ninip*) solar cells. Whereas, estimated values are 675.2 mV, 33.53 mA/cm<sup>2</sup>, 83.34% and 18.98% correspond to  $V_{oc}$ ,  $J_{sc}$ ,  $FF$  and  $\eta$  for simple Ag/c-Si(n)/a-Si:H(p)/ITO/Ag (*np*) solar cell. This improvement in the performance of c-Si/a-Si:H heterojunction (*ninip*) solar cells is due to very thin a-Si:H(i) layer on both side of c-Si wafer has passivated the most of the dangling bonds on c-Si and defect density at interface between the c-Si and a-Si:H(p)/a-Si:H(n) layer. This passivation layer also extended internal electric field at junction to separate free charge carriers to reach metal contacts immediately. The a-Si:H(n) back surface field has provided sufficient electric field and reduced the recombination losses at back side of the c-Si.

**Keywords:** c-Si/a-Si:H heterojunction solar cells, Passivation, Back surface field and Simulation

Paper ID: ICRAITMS\_202012\_068

## **Self-contained line painting system concept and improvement**

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Assistant Professor, Dept. of Mechanical Engineering, St. Martin’s Engineering College,  
Secunderabad.

### **ABSTRACT:**

There is a need to develop an automated system capable of painting lines on a position with minimal human interference, as current methods for painting lines on a position are ineffective, labor intensive, and dangerous. The human effort put forward in such a system falls short of resolving the beloved road-drawing course. In the last two decades, humans have spent a lot of money on engineering assets in an attempt to automate labor-intensive or dangerous activities. Painting lines on highways to facilitate town or municipality movement is a dangerous and physically demanding task. This proposal aims to automate the process of painting lines on the ground with the help of an autonomous ground vehicle (AGV) that is equipped with a stabilized painting mechanism. For waypoint navigation, the AGV accepts Global Positioning System (GPS) coordinates. A supercomputer visualization algorithm is installed to provide a constant visualization response for the painting process. The arrangement is in place to mark the preferred course for participation and to eliminate any high-occurrence sensations caused by the vehicle’s travel over uneven ground. Using the corresponding vision method, the stabilizing method can also reduce long-term drift (due to inaccurate GPS waypoint navigation).



Paper ID: ICRAITMS\_202012\_071

## **A Feasibility Study On HR Management On Recruiting Marketing People In Medical Logistics**

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“Assistant Professor, Department Of Science And Humanities, St.Martin’s Engineering College, Secunderabad

### **Abstract:**

This study identifies various sources of recruitment and selection processes in the Indian healthcare industry. The recruitment and selection process are the platforms for success in any organization. The reason is that Human Resource (HR) has a significant role in the overall performance of any organization. Job redesigning, integrating information on job design in training and management development programs, and executing them to ensure that sound human resource policies and practices are developed, are all done by the HR department. Presently, the Human Resource Department of hospitals are not focused on execution of the systematic and scientific HR Practices plus issues concerning the satisfaction level of employees. Hence, to understand the above issues of the Hospital sector, this research work titled “Study on Human Resources Management Practices in Hospitals and Its Impact on Employee Satisfaction” was carried out.

Key words: HR policies, Marketing criteria, Diagnostic equipment’s



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_072

## CONSUMER SHOPPING BEHAVIOR TOWARDS RETAIL STORES BASED ON SHOPPING SATISFACTION IN HYDERABAD CITY

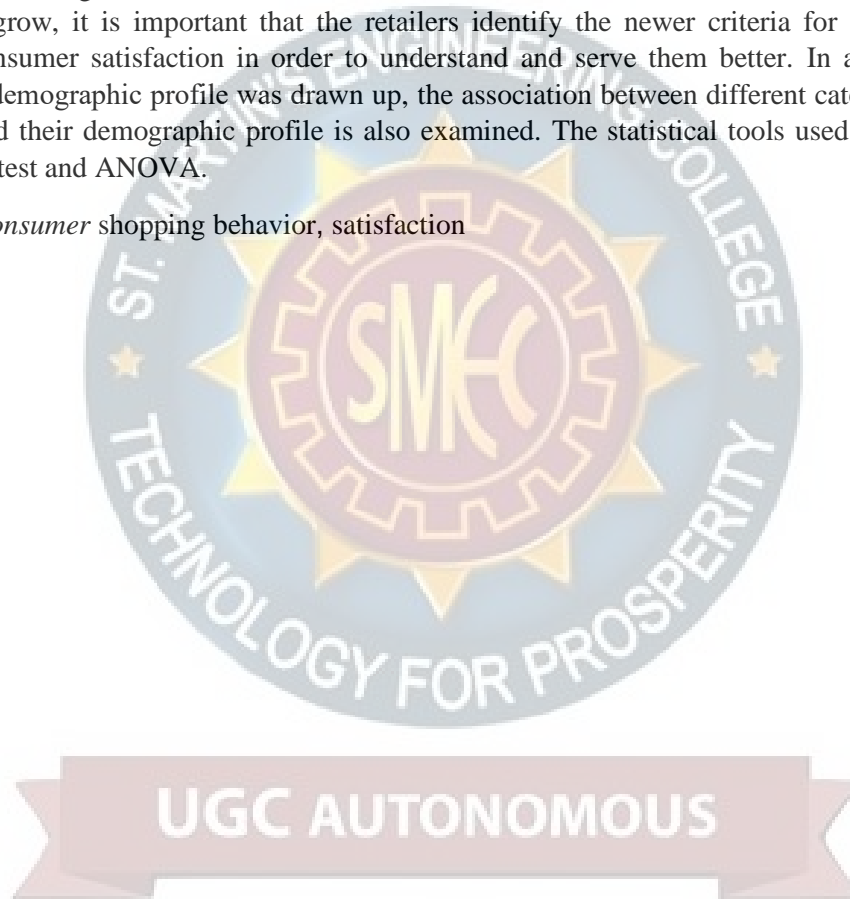
D.Nirosha

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### Abstract:

Shopping satisfaction helps the retailers to understand the target consumer shopping behavior, devise appropriate marketing strategies and promotional schemes according to the choices of a particular action. It helps the organizations to understand their customers better. As the environmental movement continues to grow, it is important that the retailers identify the newer criteria for attracting retail consumer, consumer satisfaction in order to understand and serve them better. In addition to this, respondents' demographic profile was drawn up, the association between different categories of retail consumers and their demographic profile is also examined. The statistical tools used in this part are mean score, t-test and ANOVA.

**Keywords:** consumer shopping behavior, satisfaction





Paper ID: ICRAITMS\_202012\_074

## **Fabricational Design of Spring Supported Screw Jack**

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### **ABSTRACT**

The screw jack is versatile machine is used for lifting the weights with the considerable distance. This device is most commonly used in vehicle lifting purpose during the breakdown condition, for maintenance of vehicles in workshops and other emergency purpose. The intension of using the jack is reduce the human effort required in the lifting the weights. The screw jacks reduce the human effort by increasing its mechanical advantage. In our project we formed the square thread on the cylindrical rod, the square threads are mainly used because of its load carrying capacity. We are selected equal length of links for lifting the load and these links are joined by nut and bolt. In our project we are added one more supporting member in to the assembly for increase the safety to the links by proving supporting springs into the system. These spring which helps in the lifting the loads simultaneously absorbs the excessive loads during lowering of the vehicles, if any uneven load are exerted suddenly, these spring will absorbs that load and provides support to the other links acts as a safeguard to the whole device.

**Keywords**— Linkage, Mechanical Advantage, spring, overhauling effect, Lead Screw, Square Thread.



Paper ID: ICRAITMS\_202012\_077

## **Liquid Flow in a Deformable Porous Material**

Upender Karka

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### **Abstract:**

In this paper, the stream in a deformable porous channel bounded by limited deformable permeable layer with moving unbending two equal plates within the sight of attractive field is explored. The coupled overseeing conditions are tackled the articulations for the speed field and strong dislodging are acquired. The impacts of the porous layer thickness and the delay the stream speed and removal are examined graphically. It is seen that speed diminishes with expanding in the drag, while the contrary conduct in the deformable.

**Keywords:** Viscous flow; Porous layer; MHD; Porous layer thickness



Paper ID: ICRAITMS\_202012\_078

## Liquid Flow in a Deformable Porous Material

Amith Kumar

Associate Professor, Department of Mechanical Engineering, St. Martin's Engineering college

### Abstract:

In this paper, the stream in a deformable porous channel bounded by limited deformable permeable layer with moving unbending two equal plates within the sight of attractive field is explored. The coupled overseeing conditions are tackled the articulations for the speed field and strong dislodging are acquired. The impacts of the porous layer thickness and the delay the stream speed and removal are examined graphically. It is seen that speed diminishes with expanding in the drag, while the contrary conduct in the deformable.

**Keywords:** Viscous flow; Porous layer; MHD; Porous layer thickness



Paper ID: ICRAITMS\_202012\_084

## **Thermal analysis and optimization of IC engine Piston using finite element analysis**

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<sup>1</sup>\*Dept. of Mechanical Engineering, St. Martin's Engineering College, Hyderabad, India

<sup>2</sup>\*Dept. of Mechanical Engineering, V N R Vignan Jyothi Institute of Engineering Technology, Hyderabad, India

<sup>3</sup>Dept. of Mechanical Engineering, St. Martin's Engineering College, Hyderabad, India

### **ABSTRACT**

The stress distribution of the seizure on piston four stroke engine by using FEA. Piston modeling is performed by using Computer Aided Three dimensional interactive Application (CATIAv5) software. The main objective is to investigate and analysis the thermal stress distribution of piston at the real engine condition during combustion process. The mesh optimization with using finite element analysis technique to predict the higher stress and critical region on the component. The main emphasis is placed on the study of thermal behavior of functionally graded coatings obtained by means of using a commercial code. The optimization is carried out to reduce the stress concentration on the upper part of the piston i.e (piston head/crown and piston skirt and sleeve). With using CATIAv5 software the structural model of a piston will be developed. Furthermore, thermal analysis and optimization is performed by Ansys software.

Keywords: CATIAv5, ANSYS, piston, IC Engine



UGC AUTONOMOUS

Paper ID: ICRAITMS\_202012\_088

## Applications of Machine Learning and Deep Learning in Social Networking Platform Facebook: A Review

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\*Assistant Professor, Department of Computer Science. Sh.LBS Arya Mahila College, Barnala, Punjab, India

### **ABSTRACT**

Facebook is taking over the internet these days. It is the greatest platform to connect people around the globe. It is a great source of advertisement also for international and national companies. Machine Learning and deep learning algorithms are playing a vital role to make Facebook user-friendly. Machine Learning is a subset of Artificial intelligence and a superset of deep learning. Machine learning learns from past data and provides the results without programming explicitly. These technologies are making Facebook easy to use by providing face recognition, speech recognition, language translators etc. It can determine the user's behavior, the user believes, user's likes and dislikes and user's category and accordingly can take the decision

**Keywords:** Artificial Intelligence, Face recognition, Language Translator.



Paper ID: ICRAITMS\_202012\_090

## A Secure Big Data Layered Approach for Privacy

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### ABSTRACT

Big Data frameworks create a ton of information from various sources and those can be less unswerving too. Likewise, business network systems are exceptionally interconnected, through Big Data Value Chains (BDVC) either inside or with accomplices, making their information resources and cycles more helpless against numerous digital assaults. Be that as it may, this sort of touchy composition and information work processes requires explicit assurance and security of the data. In this commitment, the authors use the significance of coupling BDVC and Big Data security just as existing commitments tend to these themes. Additionally, the paper purpose a multi-dimensional model expecting to show network protection accomplishments and decrease the hole between digital risks and how associations deal with their sensitive data. For this objective, the authors purpose a multi-layered security structure to manage security issues along BDVC. This structure, which is a nonexclusive vision and versatile to various areas, permits securing associations touchy information resources just as security concerns. Besides, this multi-layer projection guarantees an economical digital environment too.

**Keywords:** Big Data, Value chain, Security, Big Data value chain.



Paper ID: ICRAITMS\_202012\_091

## **Conformational polymorphs of 2-amino-5-nitrobenzophenone: spectroscopic, Structural and DFT approach**

A. Aditya Prasad  
St. Martin's Engineering College, Secunderabad

### **ABSTRACT**

The objective of this investigation is to compare the solid state modifications using the structure elucidated from single crystal X-ray diffraction analysis. Inter- and intramolecular hydrogen bonding interactions exhibit various supramolecular architectures in the crystal packing; these variations will confirm the polymorphism in 2-amino-5-nitrobenzophenone (ANB). Crystal cohesion is achieved by C–H···O, N–H···O, N–H··· $\pi$ , C–H···H–C and  $\pi$ ··· $\pi$  stacking interactions, responsible for the formation and strengthening of supramolecular assembly. Variations in cell parameters, XRD patterns, FT-IR vibrational frequencies and fingerprint plots support the existence of polymorphism



Paper ID: ICRAITMS\_202012\_093

## IoT Equipped Robustic Attendance Tracking System using Image Processing Technique

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Assoc Professor Department of Computer science And Engineering

### ABSTRACT

Attendance for the scholars could even be an important task in many organizations and Institutions. When done manually it generally wastes many productive time of the category. This proposed solution for this problem is through an automation of attendance system using face recognition. Face is the primary identification for any human. The proposed work describes the strategy of detecting and recognizing the face in real-time using Raspberry Pi. This paper describes an efficient algorithm using open source image processing framework named as Open CV. The proposed approach has five modules – Face Detection, Face Preprocessing, Face Training, Face Recognition and Attendance Database. The face database is collected to acknowledge the faces of the scholars. The system is initially trained with the student's faces which is collectively named as student database. The system uses user friendly programmed to maximize the user experience while both training and testing which are collecting student images and taking attendance with the system. This work can be utilized for several other applications where face recognition is utilized for authentication. The proposed work uses modified algorithm of Haar's Cascades proposed by Viola-Jones for face detection and uses LBP histograms for face recognition and uses SQL lite (lite version of SQL in raspberry pi) together with MYSQL to update the database. The system will automatically update the student's presence within the category to the student's database and sends message to guardians of absentees and also to maneuver of department.

**Keywords**—Internet of Things (IoT), Face Recognition, Attendance System, Local Binary pattern Histogram (LBPH)





Paper ID: ICRAITMS\_202012\_098

## **RISK IN TRAFFIC MOBILITY IN REFERENCE TO ROAD GEOMETRICS AND PAVEMENT FAILURE USING PRINCIPAL COMPONENT ANALYSIS**

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### **ABSTRACT**

Risk is an intuitive reaction by the road user to what he perceives to be unanticipated situations or dangers such as stress, emotional outburst, the influence of liquor, sudden disturbance on the road etc. when travelling. Risk is an expression of the road user and it is an influence generated by speed, headway and delay with variable intensities/contributors, which leads to congestion and accident occurrence. From various research, we found that risk is the expression of road user spatially on interaction over a time and speed. These intensities are due to the influence of certain characteristic influence from factors of land use pavement surface (failure), geometrics and traffic and road network characteristics. In this study, an attempt is made to identify reasons of pavement failure. For the analysis, five major roads are selected near Yellandu in Khammam district, the surface of the pavement can be taken a videography survey and data converted to bit maps, these are used to digitalize the map using auto CAD software, obtained data can be used to calculate the percentages of different types of failures which are obtained on the pavement the performance. GPS, GIS based supportive approach and data collected from field survey are done in this research as data input and a mathematical model is used for the analysis. The important outcomes in applying the PCA (Principal Component Analysis) approach were: even with the dimensionality reduction dictated by the variance, there was a limited loss of information with regard to the section condition that did not affect the overall objective of pavement management; also, information redundancy was minimized. Risk analysis has been done through PCA followed by causal techniques to identify the factors contributing to risk generation, identifying the reason for failure and the major links which are leading to congestion

**Key words:** Risk, Speed, Head way, Delay, Pavement failure, Traffic, Principal Content Analysis, Bit map and Field survey.

Paper ID: ICRAITMS\_202012\_100

## **A Module Displays: Implementation in The Farming Era of Mechanical Giants**

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Professor, Department of Mechanical Engineering, Kalinga University, Raipur, C.G. India

### **ABSTRACT**

Agriculture plays a critical role in the Indian economy. Over the last few decades, Indian agriculture has recorded good growth. Implementing new ideas in this field is very important, although a lot of work has been done in this area. The multipurpose farming robot is a fundamental and major agricultural machine for full yield. A laborious technique is the conventional method of weeding, sowing seeds and spraying pesticides. In India, bullocks, horses, and buffalo are still used by many farmers for agricultural operations. This would not satisfy the need for agricultural energy needs, in comparison to other countries around the world. We assume that human and animal efforts can be replaced from an economic point of view by some advanced mechanism that will be ideal for small-scale farmers. We are therefore designing this prototype and assume that it will fulfil all requirements and problems in real life. India is a country focused on agriculture in which 70% of individuals rely on the results of farming. But if we observe that with population growth the farm is spread among the family and because of this, farmers in India kept only two acres of farm on average. Economically, farmers are still very poor because they are unable to afford tractors and other expensive machinery, so they use conventional farming methods. So, we are designing this machinery that will fulfil all this need and solve the problem of labor.



Paper ID: ICRAITMS\_202012\_104

## ROLE OF COPPER-ALUMINA FILLER IN IMPROVING PROPERTY OF PLASTICIZERS

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2. Research Scholar, Department of Chemistry, B.K. Birla College of Arts, Science and Commerce (Autonomous), Kalyan, Maharashtra, India
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4. Assistant Professor, School of Chemical Sciences, Moolji Jaitha College (Autonomous), Jalgaon, Maharashtra, India

### Abstract

In the compounding of rubber various ingredients plays vital role in giving the desired property to rubber. Plasticizer is a one of the important ingredients for compounding of rubber. Plasticizer softens, increases the plasticity of polymer during the compounding of rubber. Compounding of rubber increases heat resistance, decreases brittleness at low temperature, increases wear resistance and decreases aging of rubber. In order to improve property of plasticizer, in this paper we studied effect of metal fillers in the plasticizers. We have prepared Metallic fillers of copper and aluminum prepared by gel –combustion method and incorporated in plasticizers. The effect of modified plasticizers on various properties of rubber like flash point, saponification value, acid value, viscosity, density is studied.

**Key words:** Compounding of Rubber, Plasticizers, Rubber, Copper-Alumina filler



Paper ID: ICRAITMS\_202012\_115

## Teaching English Vocabulary to Students from Regional Vernacular Academic Backgrounds

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### ABSTRACT

Vocabulary is important across the curriculum from language, arts and social studies to mathematics and science. It is interlinked with all the other major language skills and acts as a tool to boost students to speak, understand, read and write English. Enhancing the cognitive abilities of the child seems much easier if the children were exposed to learning in their regional language. Language proficiency is required for further learning, however, the comprehensive skills of the native language often weaken the yearning to learn new languages. In an education system riddled with inequities, language can also be an obstacle that comes in the way of learning. Educationists agree that it's best to teach in the child's mother tongue, but the issue is a complex and emotive one, given the diverse number of languages and dialects in India. Some have the advantage of exposure to the foreign language at a young age but for most of them it is taught as a subject and it remains only as a subject till the learners reach tertiary level. Understanding the constraints of the students from vernacular background, with instruction in their regional language, this paper discusses methods that benefit these students in improving their vocabulary. Keywords: Vocabulary, methods, learners, vernacular medium.

**Keywords:** Vocabulary, methods, learners, vernacular *medium*



Paper ID: ICRAITMS\_202012\_126

## **Impact of Job Satisfaction & Job Commitment On Organizational Performance With Reference to Public and Private Sector Organizations-A Profound Study**

Dr.B.Swathi

Professor & Principal, Global Education Centre[MBA], Moinabad

### **Abstract**

Employees are the most valuable resources for the successful running of any organization. In the present scenario, Job Satisfaction & Job Commitment is the most essential aspect of organizational strategy. Keeping in view the criticality of the situation, the research paper focuses on the various human resource strategies and its direct influence on performance index. Six (6) organizations were selected three (3) public sector and three (3) private sector organizations. A total of 120 respondents were chosen. Primary data collection was done through Questionnaires and face-to-face interview. SPSS was used to analyze the data. Both descriptive and inferential statistics were used in the analysis. The study proved organizational performance is highly influenced by the Job Satisfaction & Job Commitment. It is therefore recommended that employee retention strategies should be allowed to function properly in an organization which persuaded workers to stay in an organization and render their valuable and enriched services to bring success



Paper ID: ICRAITMS\_202012\_171

## The Roll Of Quality Assurance In Injection Moulding Industries

Ch Nagaraju,

\*Department of Mechanical Engineerin, SMEC, Hyderabad

### Abstract

Employees are the most valuable resources for the successful running of any organization. In the present scenario, Job Satisfaction & Job Commitment is the most essential aspect of organizational strategy. Keeping in view the criticality of the situation, the research paper focuses on the various human resource strategies and its direct influence on performance index. Six (6) organizations were selected three (3) public sector and three (3) private sector organizations. A total of 120 respondents were chosen. Primary data collection was done through Questionnaires and face-to-face interview. SPSS was used to analyze the data. Both descriptive and inferential statistics were used in the analysis. The study proved organizational performance is highly influenced by the Job Satisfaction & Job Commitment. It is therefore recommended that employee retention strategies should be allowed to function properly in an organization which persuaded workers to stay in an organization and render their valuable and enriched services to bring success



Paper ID: ICRAITMS\_202012\_055

## ADVANCED WELDING PROCESS USING FRICTION

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### ABSTRACT

The technology development in this project primarily focused on its first targeted application construction of steel pipelines for energy transmissions (natural gas, oil, hydrogen, etc.). It also benefited potential near future applications for construction of wind towers, pressure vessels, refinery vessels, shipbuilding, bridges, and nuclear power reactors. The project comprised the following major technology development activities of process innovations. They included the development of tool materials with the durability and strength necessary for joining of steels and other high-temperature materials; the concept of auxiliary heating to reduce process load and increase welding speed & productivity; and the patented multi-pass multi-layer FSW that fundamentally overcomes the thickness limitations of today's FSW approach. Development of the field-deployable FSW prototype systems to provide flexibility and affordability for on-site construction. Technology validation and demonstration fabrications. The project included the demonstration on different steel pipe diameters and wall-thicknesses based on market needs and technology progression; the validation of field fabrication capability and robustness of the developed FSW system to handle variations in materials, pipe dimensions and pipe alignment etc., and the patented pipe welding without internal support. The concept of field deployable FSW was realized and demonstrated by means of the construction and use of a prototype FSW welding system capable of joining large diameter steel pipelines, on-site. All individual program goals were met including the ultimate goal of demonstrating the ability to friction stir weld 76 cm (30 inch) diameter, 15.9 mm (0.625 thick inch) wall, X70 line pipe steel without using internal support

**Keywords:** Friction, welding, pipes, FSW



Paper ID: ICRAITMS\_202012\_007

## IMPACT OF COVID 19 PANDEMIC IN HIGH END PURCHASE DECISIONS:A STUDY ON INDIAN AUTOMOBILE SECTOR

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### ABSTRACT

We are witnessing a pandemic which is creating a change among us. Largely speaking it is changing human behavior gradually by affecting negatively the well being of the society or economy. Prevention measures been taken by government and most of the individuals but the rage of this virus is noticeable by all us alive in this era. Having the past experience that we have regarding consumer behavior for purchase activities this paper will focus on the current market situation that every business house is facing because of this pandemic. We have witnessed recession which has affected the consumer buying behavior and simultaneously affecting various sectors of the market. This paper will focus on the change in consumer buying behavior in high end purchase process. Study will focus on the automobile sector to analyze the difference in activity among individuals before purchasing the product. Hypothesis has been developed to analyze numerically the findings. The findings provide a clear view of the independent variables like economic instability, psychological instability, social norms or precautions and protection for personal health. The dependent variable is high end purchase decision. The data was collected from people having car or willing to purchase an automobile. The numbers of respondents are 100.

**Keywords-** Government, Dynamics, Stability, Consumer Behavior, Protection





Paper ID: ICRAITMS\_202012\_009

## Cure Rate Mixture Models of Two Component Non – Identical Survival Distributions for Breast Cancer Patients Using EM Algorithm Approach

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Corresponding author: Dr. T. Leo Alexander<sup>2</sup>, leoalex.62@gmail.com<sup>2</sup>

### ABSTRACT

In Survival analysis we consider the cure rate mixture models for two component non – identical survival distribution such as Exponential, Gamma, Weibull, Lognormal and Gompertz. In that, we estimate the cure rate of given population is divided into two groups, one group of population is assumed cured and other group uncured. Expectation-Maximization (EM) Algorithm is used for the estimation of the parameters of the non - identical mixture models for survival distributions. The above mentioned Survival distributions are fitted distribution help us to identify the underlying distribution of the sub-population. The estimated cure rate can be used to judge the efficacy of the treatment for Breast Cancer patients.

**Keywords:** Breast Cancer, Cure Rate, Expectation-Maximization (EM) algorithm, Log-Likelihood (LL), Mixture Model, Simulation study and Survival Distribution



Paper ID: ICRAITMS\_202012\_012

## **CROSS-CULTURE DIFFERENCES IN MANAGEMENT OF ORGANISATIONS ESTABLISHED IN TRICITY**

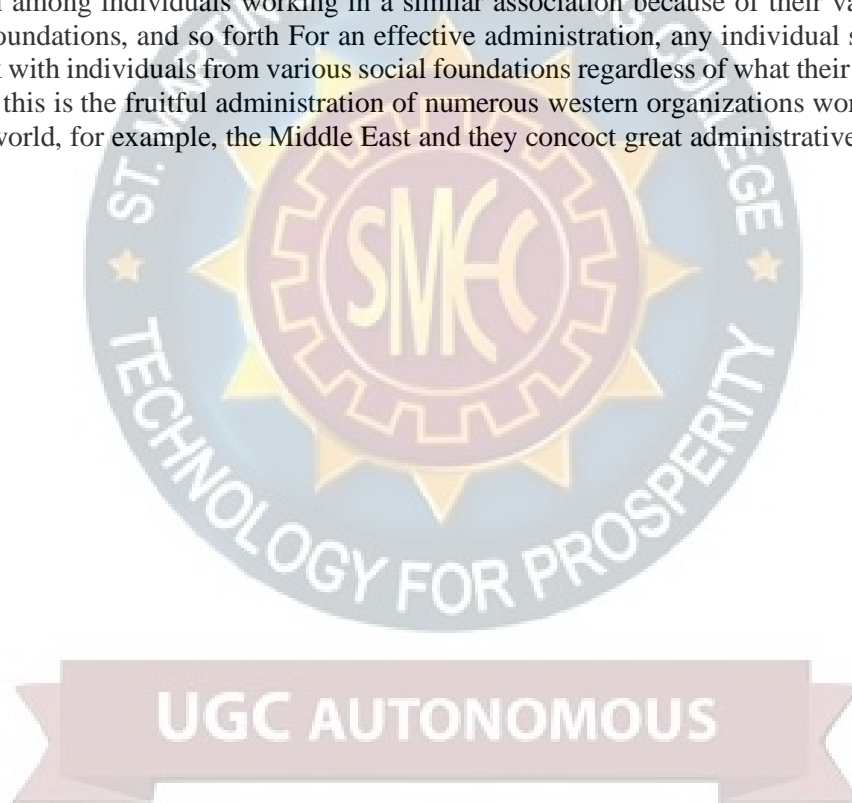
**Ramandeep Bawa, Dr Kavita Aggarwal**

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### **ABSTRACT**

This exploration targets considering multifaceted contrasts in administration. There are regions in administration whereby contrasts towards perspectives, practices, working, correspondence issues which may cause struggle. In light of the distinctions in societies, there may be some sort of misconception among individuals working in a similar association because of their various qualities, convictions, foundations, and so forth For an effective administration, any individual should have the option to work with individuals from various social foundations regardless of what their social direction is. A proof on this is the fruitful administration of numerous western organizations working in various pieces of the world, for example, the Middle East and they concoct great administrative outcomes.



Paper ID: ICRAITMS\_202012\_014

### **Teaching English as an Interpersonal Skill in India: A Distant Dream ?**

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#### **ABSTRACT**

India is a multi cultural, multi ethnic and multilingual country. With myriad diversity, English has become the unofficial language of the country. It is English language which connects the country. English language has always had a peculiar status in our nation. The genesis of English can be traced back to the 18th Century with the advent of British rule. Today in the contemporary world, when English has become the global language and dominates every field, the position of English language in India has strengthened even more. English language is considered as the most important interpersonal skill that a person can possess. Interpersonal skills are synonymous with Soft Skills, Communication Skills, Emotional Intelligence and Employability Skills. Interpersonal skills are imperative for they make an integral part of a person's personality. Basically, it is an ability to interact with others in a society and form relationships. Unfortunately but it is true that the concept of acquisition of English as an interpersonal skill is virtually absent in India. English is never treated as an interpersonal or soft skill in our country. It is merely treated as an appendage subject to get a degree certificate. Hence, in the country the majority of the population lacks proficiency in English. When 'Globalization' is the new mantra in contemporary times, it becomes imperative to acquire Interpersonal Skills in English. In recent years, English as an interpersonal skill has become more and more important. Communication in English is now considered as a benchmark of sophistication and being best in the field. Yes, one can communicate in a different language, but it is evident that English has more importance and relevance since it is a universal language. A person who does not possess English as an interpersonal skill is bound to lag behind in this fast, competitive world for IPS permeates every aspect of a person's life.



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Paper ID: ICRAITMS\_202012\_015

## OSCILLATION RESULTS FOR FOURTH ORDER

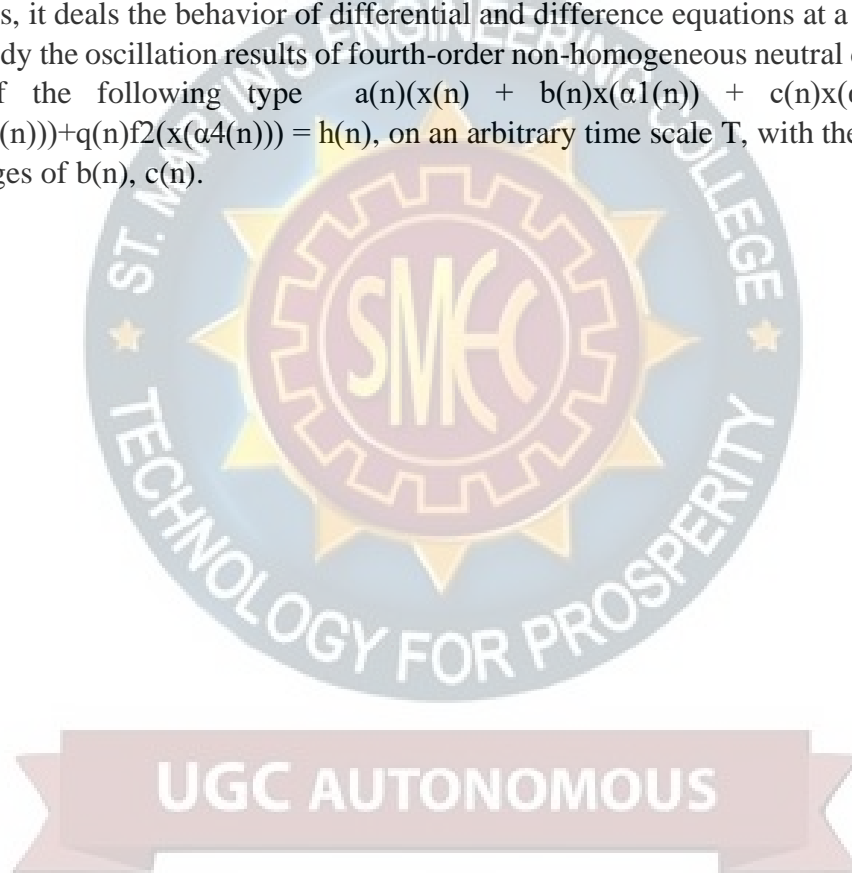
### NON-HOMOGENEOUS NEUTRAL DELAY DYNAMIC EQUATIONS ON TIME SCALES

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#### ABSTRACT

In this paper, we consider the fourth order non-homogeneous neutral delay dynamic equations on time scales, it deals the behavior of differential and difference equations at a time. Here we interest to study the oscillation results of fourth-order non-homogeneous neutral delay dynamic equations of the following type  $a(n)(x(n) + b(n)x(\alpha_1(n)) + c(n)x(\alpha_2(n)))\Delta^2 + p(n)f_1(x(\alpha_3(n))) + q(n)f_2(x(\alpha_4(n))) = h(n)$ , on an arbitrary time scale  $T$ , with the condition for different ranges of  $b(n)$ ,  $c(n)$ .



Paper ID: ICRAITMS\_202012\_024

## JUST-IN-TIME INVENTORY MANAGEMENT FOR HEALTHCARE WORKERS

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### ABSTRACT

This paper discusses product planning and integrated distribution with regard to patient safety within the health care chain. The health care facility consists of one supplier and multiple clients such as hospitals or health facilities. There is a tendency to think of a complete limit, many a times and many consumers where drugs are delivered from suppliers to satisfy the demand of different consumers for each cost. Moreover, it can formulate the integrated inventory and distribution coming up with considering patient safety as a mixed-integer optimisation downside that is NP-hard optimisation model. A genetic algorithmic rule can be generated that represents new body with appropriate crossover and mutation operators for vehicle routing and inventory solutions. Increased spending on health care and other items puts increasing pressure on improving the efficiency of the health care industry in industrial management and research is often used effectively for this purpose. According to many health care professionals the cost of the hospital where the hospital's central pharmacy takes on the role of the central manager of drug procurement and distribution in internal wards. This paper aims at asset management strategies to integrate the integration mechanisms and internal controls that have long been developed to increase the cost of pharmaceutical material use in the health care sector.

**Key Words:** Healthcare, Optimisation model, Patient safety, Genetic algorithm, Mutation operators.

Paper ID: ICRAITMS\_202012\_033

## **HUMAN RESOURCE FORECASTING AND RETENTION APPROACHES IMPLEMENTED IN PRIVATE SECTOR BANKS IN TAMILNADU**

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### **ABSTRACT**

This study emphasizes the human resource (HR) observes that endorse employee retention in private sector banks in Tamilnadu. Human Reserve is a vital business skill and inclusive performance of companies, depends upon how they are inferred. Forecasting of Human Reserve is essentially matching the appropriate number of qualified and talented people with the appropriate job at the appropriate time and appropriate place. It is a strategic factor for prime organizational enactment, progress and viable development of any formal organization. This paper analyses the objectives and importance of Human Resource planning in retaining employees. Mutually, they cover job empowerment, job satisfaction, performance appraisal and learning and development. It examines the progressions and performances of Human Resource Planning in India and how it can be made more operative. This study also aims why employee retention is so significant for the organizations and monitors the management to formulate the operative strategies to advance the employee retention.

**KEYWORDS:** Human Resource Planning, Employee Empowerment, Retention Strategy, Rewards & Recognition, Forecasting, Performance Appraisal,



Paper ID: ICRAITMS\_202012\_047

## The Macro Skills For The Bright Career Of Technocrats

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### ABSTRACT:

People's lives are connected with communication skills. It has become a basic necessity in every field to attain success. It functions as a true means to achieve goals when a communicator receives a good command over communication skills. Indian English is much affected by the interference of regional languages. Consequently, the Influence of Mother Tongue is considered the main barrier of communication in India. English being the lingua franca it connects people world wide. The easy access of communication in English has become the need of hour for an aspirant who wishes to shine well within the professional similarly as academic domain. The use of language becomes effective and successful only when the beneficiary decodes the similar message as conveyed by the sender. Communicative means are the essential four skills viz. listening, speaking, reading, and writing. Engineering is one in all the leading fields of learning within the world but it's experiential; though the students are technically superior but they're in dire need of effective communication skills which decide their job opportunity in MNCs. This research paper produces listening as receptive skill and speaking as productive skill. Communication through four macro skills may lay the path towards successful career and it should not be ignored. Non-verbal communication should complement and supplement the verbal communication. The confidence of a communicator along with effective speaking ability and attentive listening makes him an achiever.

**Keywords:** basic necessity - barrier - lingua franca - aspirant – macro skills – supplement - achiever



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Paper ID: ICRAITMS\_202012\_027

## A STRANGE THREE SPECIES MATHEMATICAL MODEL WITH DIVERSE NATURES OF AMMENSALISM AND COMMENSALISM

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### ABSTRACT

This paper explores the biodiversity of the strange three species ecosystem extensively with Ammensal-EnemyHost- Commensal species with harvesting rates which are proportional to the population sizes. The present study includes mainly an analysis of local stability and global stability. The research is carried out in the different facets of stochastic and diffusion analysis. The series of solutions of the designed ecological model are extracted by using the homotopy perturbation method.

**Key words:** Stability, Local Stability, Global Stability, Routh-Hurwitz Criterion, HPM, *Gaussian White Noise*, Diffusion Analysis





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