Jaihind Comprehensive Educational Institute's

JAIHIND COLLEGE OF ENGINEERING, KURAN AND SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE

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ORGANIZES

JiCON 2020

INTERNATIONAL CONFERENCE ON EMERGING TRENDS IN ENGINEERING & SCIENCES (ICETES)

Sponsored by- Savitribai Phule Pune University, Pune

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Proceeding
of
International Conference on Emerging Trends in Engineering and Sciences (ICETES)

JiCON-2020.

16th-17th Jan 2020

Jaihind College of Engineering, Kuran

in association with Savitribai Phule Pune University, Pune.

MESSAGE

I'm happy that Jaihind College of Engineering, Kuran is contributing to the field of research by organizing this International Conference on Emerging Trends in Engineering and Sciences (ICETES) J*i*CON 2020 in Jaihind College of Engineering . I hope this conference will bring together students, teachers, researchers, scientists and industrial, professionals to share their findings and discuss them in detail.

I congratulate all the delegates and participants and hope that this event nourish and fosters the spirit of research, thereby catering to the wholesome development and enrichment of the society.

Wishing the event all success.

Hon. Shri. Tatyasheb Gunjal
Chairman, JCEI, Narayangaon

MESSAGE

It is noteworthy that JCEI's, Jaihind College of Engineering is progressing at a very fast pace. This year we are hosting the JiCON-2020 International Conference in series in the Tenth year of existence of the college. The response is very encouraging. The papers submitted by the Students demonstrate the enthusiasm in their creations. Sponsorship of the Conference by the "Savitribai Phule Pune University" is a big blessing for all of us. Conference helps to reflect the work done by the students and the process of developing their minds to becoming an engineer. That is actually the aim and objective of education. The thought of our Chairman that quality education to the poorest and needy children without being the burden on parents is being witnessed in the conference. Ultimate goal of the conference being to obtain views from others on the work projected by the students in their papers. These views will help students to improve upon and do a better job in future.

Finally this conference is a step towards setting up of a good professional, satisfying life by the students and alleviation of poverty for the nation. We would like to express our deepest appreciation to the authors whose technical contributions are presented in these proceedings. It is because of their excellent contributions and hard work that we have been able to prepare these proceedings. Wishing a grand success to the conference.

Prof. S. D. Gunjal
Director
JCEI, Narayangaon

MESSAGE

Warm and Happy greeting to all.

I am immensely happy that our college is organizing an International Conference on Emerging Trends in Engineering & Sciences (JiCON 2020) on 16th and 17th Jan 2020 is going present a collection of various technical papers in the proceedings.

Under the guidance of our management JCOE continues to march on the way of success with confidence. The sharp, clear sighted vision and precise decision making powers of our management has benefited our college.

The dedicated HOD's and staff members and disciplined students of JCOE are the added features of our college. The role students in building nation cannot be overlooked and students at JCOE are trained in all aspects to become a successful engineers and good citizens. On this occasion I would like to wish all very best to all delegates.

I also congratulate to Convener, Organizing Committee and all Coordinators and students for their contribution and efforts for the success of the conference.

I wish the conference all the success.

Dr. D. J. Garkal,

Principal

Jaihind College of Engineering, Kuran

FOREWORD

Welcome to the 2020 Third International Conference on Emerging Trends in Engineering & Sciences (ICETES-2020) ' organized by Jaihind College of Engineering, Kuran (Pune), Maharashtra. Thisconference is scheduled to be held on 16-17 January 2020. The main aim of the conference is to provide a igh level international forum to bring together industry professionals, academics, and individuals from institutions, industrial and government agencies to exchange information, share achievements, and discuss the advancement in the fields of Computing, Communication, and Information Security etc. This is one of the most prestigious conferences conceptualized in the fields of engineering and sciences. The conference features a rich collection of original research embodied through oral presentation, invited talk and interactive demos.

We received submissions from across the world for all track such as civil engineering, computer engineering, E&Tc engineering, Mechanical engineering, general science fields. Each submission was initially screened for conference scope, technical relevance and possible plagiarism by technical program committee. The papers successfully passed the screening stage were assigned to reviewers based on their area of expertise, Outcome of the reviewer were then examined by technical program committee for their recommendation on the paper to the organizing chair. The organizing chair communicated to corresponding author about status of the paper and changes in manuscript if any required. 110 out of 357 papers were accepted as full paper .Te conference received manuscripts from different states. The conference would not have been possible without vision and dedicated efforts of a number of people .I am indebted to the management of JCEI, Principal, Program committee members for their exceptional work.

I would like to thanks to all 357 authors who have submitted their research review articles for considering JCON 2020 as a platform to present and publish their work. I also would like to deploy acknowledge all the presenters. Session chairs and attendee who bring JCON 2020 a valid meaningful and potential encouragement.

Dr. R. M. Mulajkar
Convenor NCETES-2020

FOREWORD

It is my great pleasure to present the proceedings of the International Conference on "**Emerging Trends in Engineering and Sciences",ICETES (JiCON 2020).**

I welcome the participants of **JCON 2020**. The main goal of organizing this conference is to share and enhance the knowledge of every individual of this world. We have given a good opportunity for those who have a desire in knowing the present technological developments and also share their ideas. Furthermore, this conference will also facilitate the participants to expose and share various novel ideas. The conference aims to bridge the researchers working in academia and other professionals through research presentations and keynote addresses in current technological trends. It reflects the growing importance of intelligent systems as a field of research and practice. You will get ample opportunities to expand your knowledge and network. Outside of the conference, I hope that you would enjoy some of the many attractions found in and around our beautiful campus of **Jaihind College Of Engineering**. I wish that ICETES will keep on growing in coming years with more impact on the International research community. I thank the conference committee for extending their valuable time in organizing the program and all the authors, reviewers, other contributors for their bright efforts and their belief in the excellence of **J*i*CON 2020** and Jaihind faculty for making a conference success.

Dr. V. M. Dhede
Convenor NCETES-2020

MESSAGE

JiCON 2020 conference has established as reference for the high quality research in all expects for interaction and exchange of ideas. JiCON 2020 fortunate to attract high interest among the community .The conference received papers from different fields the members of technical review committee work efficiently .we are grateful to thanks all authors and all committee members for their hard work and dedication .

JiCON-2020 Co-ordinator
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Prof.G R Nangare
Prof.D V Bharitkar
Prof.A V Kanade.

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CIVIL ENGINEERING

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JCON20_CIVIL_101

Role of Geosynthetics in Sustainable Development

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Abstract **:** Gesoynthetics manufactured from polymeric material are gaining popularity as one of the versatile construction material used with soil, rock, earth, or other geotechnical engineering related material as an integral part of a man-made projects like retaining walls, embankment for roadway and railway, to derive benefits out of its presence. Road pavements are one of the areas where use of geosynthetic is gaining momentum. When geosynthetic is used in pavements or other structures, it may require performing more than one function like separation, reinforcement and drainage, filtration and liquid barrier. Wide variety of geosynthetics are available in market from which one can choose a geosynthetic depending upon the function to be performed by the geosynthetics. Their selection to perform one or more than one function depends on the physical, mechanical and hydraulic properties of the geosynthetics.

JCON20_CIVIL_102

Prediction of blast loading and its impact on building

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Abstract: The use of movable bombs to attack main city centers has been a visage of expedition by terrorist organizations around the world. A bomb explosion within or immediately nearby a building can cause catastrophic detriment on the building's external and internal structural frames, collapsing of walls, blowing out of large expanses of windows, and shutting down of critical life-safety systems. Loss of life and injuries to occupants can result from many causes, including direct blast-effects, structural collapse, debris impact, fire, and smoke. The indirect effects can collect to forbid or prevent timely migrate, thereby contributing to additional casualties. In addition, major catastrophes resulting from gas-chemical explosions result in large dynamic loads, greater than the original design loads, of many structures. Due to the menace from such extreme loading conditions, efforts have been made during the past three decades to develop methods of structural analysis and design to resist blast loads. The analysis and design of structures subjected to blast loads require a detailed understanding of blast phenomena and the dynamic response of various structural elements. This paper presents a pervasive overview of the effects of explosion on structures.

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JCON20_CIVIL_103

Earthquake Resisting Elements and Techniques in High Rise Buildings

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Abstract - An earthquake is the shaking of earth surface due to sudden release of energy from earth which causes seismic waves which then travel in horizontal and vertical direction. It causes horizontal and vertical ground movement or vibration. These seismic waves cause disturbances in in buildings. The disturbance caused depends on position of building with respect to the centre of disturbance called as epicenter. Intensity of these seismic waves is maximum at centre and goes on reducing away from epicentre. Generally horizontal waves are of stronger than vertical so buildings are designed to horizontal seismic forces. These valves travel in any direction but from design purpose it is resolved in two orthogonal directions. Few constructional precautions may help to avoid or minimize damage in buildings. Earthquake resistance of building may be improved with proper design and construction of structures. Some earthquake resisting elements like shear wall, moment resisting frame or innovative techniques like base isolation, or energy dissipation system are used in many high rise buildings to avoid or minimize damage and hence loss of lives and properties. All these techniques are reviewed herewith with special attention on shear walls

Keywords—Earthquake resistance, shear wall, base isolation, energy dissipation

JCON20_CIVIL_104

Cost Optimization Between Brick Wall And Precast Panel

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Abstract-- Times, money, skilled labour's are most important and powerful things in civil engineering. The aim of project is to reduce cost, time and achieve economy. It also maintains the quality of work and increase the productivity. The structures is constructed of R.C.C. and another work of masonry is replace by panels which reduce cost up to 30% and increase the carpet area. This pre-cast panel's made up from fly ash controls the air pollution and also provide good fire resistance properties. It is "GREEN PRODUCT"Length of panels is fixed as per site condition up to 1750mm length, 500mm height and 50 mm to 65mm thickness as per need .The panels is made up from cement, crush sand and fly ash with ratio 1:5 and 1:6, which follows 3R principle. It reduce Co_2 consumption up 50%. Dead load of structure reduced upto 30%.It is applicable for "PradhanMantriAwasYojna", building construction, shop's, restaurant's, government offices and any structure for partition wall purpose.

Key word:-PradhanMantriAwasYojna, pre-cast R.C.C. panel's, 3R, fly ash, GREEN PRODUCT.

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JCON20_Civil_105

Review Paper On Castellated Beam In Pre-Engineered Building

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Abstract- Castellated beam is new concept in Civil Engineering filed. This system was started from 1849 to enhance the bending moment of the beam. After World War II, there is shortage of steel for this reason this beam is adopted for increasing strength of beam. In 1950 there is also advancement in this system firstly opening was provided in hexagonal pattern but from 1950 it was provided in circular pattern and these beam is called as cellular beam. The global steel industry contributes about 7% of greenhouse gas emission to the earth's atmosphere. Consequently efforts have been made in the steel industry to use waste materials as steel beam for structure. Castellated beam is section in which increase width of section without increasing the self-weight of section. From which we can manufacture more width of section without damaging to the atmosphere.Keyword- Castellation, Pre-engineered.

JCON20_Civil_106

Review paper on Analysis of Concrete by Partial Replacement of GGBS and Foundry Sand

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Abstract- Now a days good quality natural river sand is not readily available, it is to be transportated from a long distance. These resources are also exhausting very rapidly. So there is a need to find alternative to natural river sand. Natural river sand takes millions of years for its formation and is not renewable. As a substitute to natural sand , artificial sand is used as a complete replacement. In this project the behavior of concrete is assured by partially replacing the natural sand with foundry sand which is a waste product from machine industries. The experimental work is mainly concern with the study of mechanical properties like compressive strength, split tensile strength and as well as flexural strength of concrete by partial replacement of artificial sand by foundry sad as fine aggregate. Tests over carried out on cubes, cylinders to studies the mechanical properties concrete using foundries and compare with concrete with natural sand as fine aggregate. Artificial sand was replaced with five percentages (0%,5%,10%,15%& 20%) of Waste Foundry Sand by weight. A total of five concrete mix proportions are made with and without foundry sand. Compression test, splitting tensile strength test and flexural strength test were carried out to evaluate the strength properties of concrete at the age of 7 &28 days.
Index Term:- foundry sand, fine aggregate ,Artificial sand, Compression testsplitting tensile strength test, flexural strength.

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JCON20_CIVIL_107

Review paper on The Assessment of Jalyukta Shivar Abhiyan Success

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Abstract- JYS is the Government of Maharashtra's program to provide water for all and make villages scarcity-free. Maharashtra has been witness increases irrigation and drinking water stress in recent years. This scheme built-up an action of progress and coordination between various government organization service group and program during planning and implementation levels and stresses on people's participation as one of the key objectives. This scheme aims is to make 5000 villages drought free every year. This Program aim at solving water woes of draught-prone regions is already a hit with farmers as many villages are inching towards becoming water-sufficient. With unique ambition like Jalyukta Shivar, water scarcity will definitely be a thing of the past!Storing rain water within the village boundaries, increasing ground water level, creation of decentralized water bodies, rejuvenation of the old water storage structures, creation of new water bodies, replacing the storage capacity, increasing area under protective irrigation by effectual water use, improve of Ground Water Act, de-silting of structures with people participation, creation of water awareness, publicity and sensitization among the people, peoples participation in water budgeting. The Government of India (GoI) has created a new Ministry of Jal Shakti to allow faster decision making on all subjects related to water. On 1st July, 2019 the GoI has launched the ambitious Jal Shakti Abhiyan (JSA) across 256 districts covering 1593 water stress blocks with a focus on water conservation and rain water harvesting. The effort will be to make water conservation a "mass movement" like Swachhata Abhiyan in the country MGNREGA is a key partner in the JSA and is committed to make it a success.

Index Terms—Ground Water Table Increases, Improve farmer economy, Slow down rain water Runoff, To make a Drought free Maharashtra.

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JCON20_CIVIL_108

Construction Safety Audit

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Abstract: Safety in construction is of paramount importance as any casualty will cause irreparable loss of human life, money and progress of labor resulting in reduction in morale and de-motivation of the manpower. so on stop occurrence of an accident, every organization should follow the security norms and make sure that they're effectively implemented. housing industry is extremely susceptible to hazards regarding site activities and construction projects engage sizable amount of contract workers. Contract workers come from varied trades especially from rural areas and agricultural background and don't have proper training in construction safety.
Key Words - Safety, Audit, Program, Risk, Management, System, Site, workers, Project, Hazards, Precaution.

JCON20_Civil_109

Utilization of Plastic Waste and Building Demolition Waste in Pavement Block

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Abstract--The aim of this project is to replace cement paste and utilize plastic waste such as plastic bottles as well as crushed building demolition waste used as fine aggregates in pavement block and to decrease the cost of paver block when associated to that of convention concrete paver blocks. This project will also help to reduce environmental pollution and disposal problem of plastic waste and demolition waste of building. Huge amount of plastic wastes have been collected from several places such as tourist and public places etc. High density polyethylene bottles are collected, cleaned and used as a replacement for cement in the manufacturing of Paver Blocks. Demolition waste replace as fine aggregates. It will be definitely a cost economical and can be applied in different forms. And also help to reduce environmental pollution, dumping and disposal problem of waste plastic.

Key word: - Compressive strength, Demolition waste, Pavement Block, Plastic waste, utilization of waste

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JCON20_CIVIL_110
POROUS ASPHALT ROAD FOR STORM WATER MANAGEMENT

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Abstract: Porous asphalt roads offer developers and planners a replacement tool in their tool for managing storm water. These roads, mostly used for parking heaps, enable water to empty through the paved surface into a stone recharge bed and infiltrate into the soils below the road. Such roads have been proving their price since the mid-1970s, and up to date changes in storm water laws have prompted several consulting engineers and construction officers to hunt data regarding them. Porous asphalt roads are area of nice interest to site planners and public-works departments. With the proper design and installation, porous asphalt can provide cost-effective, attractive roads with a life span of more than twenty years, and at the same time provide storm-water management systems that promote infiltration, improve water quality, and many times eliminate the need for a detention basin. The performance of porous asphalt roads is similar to that of other asphalt roads. And,
Like other asphalt roads, they can be designed for many situations
Index Term: - Porous Asphaltroad, StormWater, Valueeffective, Detention Basin

JCON20_CIVIL_111
WATERSHED MANAGEMENT OF ALKUTI VILLAGE

S.D.Pansare, D.V.Saundade,G.C.Vishe, D.S.Yewale, Prof. Bharitkar D. V.
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Abstract – Watershed management plays a vital role in reducing soil erosion and water conservation. Alkuti is a small Village in Ahmednagar District in Maharashtra. Alkuti is a village located at 40 km from Narayangaon in Pune District. It is lies between Latitude 19’ 05’’ and Longitude 74’23’’.This village facing scarcity problem during few years. The water sources in the village are not perennial; it indicates that area is drought area and requirement of watershed management technique essential. Hence watershed development technique like rain water harvesting, check dam, farm pond, stone bunds, boulder checks etc. are suggested to make the village self-sufficient in case of water demand.

Keywords: Watershed, Water Scarcity, Watershed management technique, Geographic Information System

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JCON20_CIVIL_112

Implementation of Green Building Strategies on GEETAI Boy's Hostel

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Abstract - The building industry is one of the major energy consumers and emitters of Green House Gasses (GHG). It consumes 38% of the global energy; and this does not include the usage of other resources such as water. Globally, this has increased the crisis of global warming and has led to development of Green buildings. In the Sub Saharan Africa alone, 56% of energy used is by building operations. Green buildings are marketed as economical, resource efficient and environmentally friendly compared to the convectional buildings. This study investigated the extent of adoption of green building concepts in commercial buildings and the key challenges arising from their adoption with the aim of determining appropriate strategies for implementing them. The study was conducted through a survey method and used questionnaires, interviews, observations for data collection. It also reviewed documented data from available records including journals and books. The study revealed that large percentage of the building construction players and professionals involved in the recently sampled constructed commercial buildings in our country were aware of the green building concepts but only small percentage of the concepts had been incorporated in the buildings. In this paper a study is conducted which determine the main concepts involve in the construction of green buildings moreover the strategies are also discussed which can help to create awareness in between people regarding the benefits of green building and could be a step towards green building practice for the future world. Key Words: Greenhouse gases, strategies, commercial building.

JCON20_CIVIL_113

Stabilization of Soil by Using Waste Plastic

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Abstract – Soil stabilization is technique which improves the engineering parameters of soil. Such as increasing shear strength etc. the foundation is very excessive for any structure. And it has strongly adequate to support the structure. The soil which creates the problems like, swelling, shrinkage and unequal settlement in foundation by using plastic bags, bottles. Other plastic products creates the problems in environment. This study has considered the solution for stabilization of Expansive soil by using waste plastic and without plastic. So, use of plastic for soil stabilization by economical and ecofriendly to reduce environmental pollution and improve soil property.

Keywords: Soil Stabilization, Black Cotton Soil, Plastic, California Bearing Ratio, Direct Shear test.

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JCON20_CIVIL_114

Partial Replacement of Cement by Hyposludge

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Abstract: The increasing amount of waste is a concerning reality that has arose the sustainability issues of the environment. Hypo plant in the paper industry generates a large volume of waste in the form of slurry, disposal of which causes environmental pollution. The production of cement also accounts for the global warming by releasing carbon dioxide in the atmosphere. Therefore, formulation of concrete with industrial waste can help in minimizing the environmental problems. Here hypo sludge is used as a replacement of cement in concrete. It may be use as a partial replacement of cement in pervious concrete. In this research study the (OPC) cement has been replaced by hypo sludge accordingly in the range of 15% ,25% and 35% by weight of cement for 0.30, 0.35, and 0.40 water/cement ratio. The workability of concrete was tested immediately after preparing the concrete whereas the compressive strength, splitting tensile strength and flexural test of concrete tests were tested after 7,14 and 28 days of curing. The addition of hypo sludge increases the strength of concrete for all curing ages up to certain point. After that, there is an abrupt reduction in strength of the concrete. Conceretion of hypo sludge decreases the cost of concrete upto 18.35%.

Index Term :- Hyposludge, OPC Cement, compressive strength, splitting tensile strength, flexural test.

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JCON20_CIVIL_115

The Determination and Assessment of Optimum Internal Thermal Insulation for Multifamily Building

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Abstract- The Volatile and increasing energy prices, concern over environmental impact, and occupant health and comfort – these are the drivers of green building today. In fact, these trends have become of more important than any thing else importance for commercial, institutional and residential building owners. Thermal insulation in buildings is an important but largely ignored factor to achieving thermal comfort for buildings. Insulation reduces unwanted and expensive heat gain or loss and can decrease the energy demands of cooling and heating systems. Different types of insulating materials in use today include rigid polyurethane foam, polyurethane spray, expanded and extruded polystyrene foams, glass wool / rock wool etc. Thermal insulation also involves a range of designs and techniques to address the main modes of heat transfer: conduction, radiation, convection and evaporation condensation.The thermal covering defines the conditioned or living space in a house. The basement may or may not be included in this area. The Insulation a house should have depends on building design,climate, energy costs, budget, and personal preference. Regional climates make for different requirements. Building codes specify only the bare minimum insulating beyond what the code requires is recommended for long-term savings. The insulation strategy of a building needs to be based on a careful consideration of the mode of heat transfer and the direction and intensity in which it moves. This may change throughout the day and from season to season. It is important to choose an suitable design, the correct combination of materials and building techniques to suit the particular situation. Insulation primarily takes care of the heat transfer through conduction; however, certain techniques which also radiation transfers have evolved in the industry and are available. It is appropriate here to have a good understanding of the heat flow types which prevail in buildings. This study will help in the development of polymer materials in industries for withstanding mechanical and thermal properties of phenol-formaldehyde. In this reinforcing materials was used to improve the mechanical and thermal properties of phenol-formaldehyde. Phenol-formaldehyde was one type of thermosetting material and this was highly cross linked. This resin was produced in the presence of acidic catalyst with poly-condensation of phenol and formaldehyde.

Index Terms-- Building Insulation, Construction Material, Energy Saving, Phenol-Formaldehyde, Properties , Possibilities, , Requirements, Thermal Insulation , Thermal Performance, Waste.

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JCON20_Civil_116

Effect of Hollow Core On Column Portion and Fill Different Materials in it

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Abstract - Concrete is one which satisfies the performance criteria which can be defined in terms of strength, durability, permeability, shrinkage etc. due to virtue of this concrete, it can be used in many important applications like in the construction of power plants, roads, buildings, bridges etc.The hollow reinforced concrete columns are desirable to employ in constructions, especially in seismic zones because of minimizing the superstructures' weight and subsequently the seismic response. The using of hollow columns reduces the loadings transferred to foundations; hence smaller foundations are required. Therefore, hollow columns are an economic choice in areas where the concrete cost is comparatively high. Finally, the hollow columns allow easy to access different services like pipes for electric wiring and plumbingThe hollow reinforced concrete columns are desirable to employ in constructions, especially in seismic zones because of minimizing the superstructures' weight and subsequently the seismic response. The using of hollow columns reduces the loadings transferred to foundations; hence smaller foundations are required. Therefore, hollow columns are an economic choice in areas where the concrete cost is comparatively high. Finally, the hollow columns allow easy to access different services like pipes for electric wiring and plumbingThe hollow reinforced concrete columns are desirable to employ in constructions, especially in seismic zones because of minimizing the superstructures' weight and subsequently the seismic response. The using of hollow columns reduces the loadings transferred to foundations; hence smaller foundations are required. Therefore, hollow columns are an economic choice in areas where the concrete cost is comparatively high. Finally, the hollow columns allow easy to access different services like pipes for electric wiring and plumbing.

Keywords: Hollow column, strength, Ductility, Exposure, Specific gravity.

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JCON20_CIVIL_117

Generation of Electricity by Using Road Transport Pressure

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Abstract- Electricity has become a lifeline of present day for human beings and thus its demand is increased continuously. There is the different ways for generate pollution free electricity. At one solution for concern about the gap between demand and supply of electricity. On the other hand, traffic on the road all over the world is increasing day by day thus; congestion on road is becoming inevitable with the fancy of masses towards personal transportation system for their growing mobility. Energy demand and heavy traffic correlation motivate to dream about the road that would harvest energy from the vehicles driving over it. For this, piezoelectric material construct a road, the piezo-smart road, can provide the converting pressure generated by the moving vehicles into electric current. The system is based on piezoelectricity, which uses metallic crystals on road to generate electricity when place under the pressure of quickly moving vehicular traffic. With the technology, now, engineers are poised to harvest some of the spare energy of the world's moving vehicles. When a vehicle drives over the road it takes the vertical force and compress the piezoelectric material, thereby generating electricity.

JCON20_CIVIL_118

Eco Floating Homes

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ABSTRACT - The attempt was made to design a low cost floating house suitable for people in low lying areas such as Bangladesh. The prototype house considered for the present study has the carrying capacity of 1850 kg loads with sufficient freeboard of 30% excluding the self weights of the supporting ten airtight empty steel drums in water and having a floor area of 120 ft2. These steel drums that are locally available and provide the atmosphere to live in without the fear of losing possession during flood. The value of metacentre ht (10.22 ft) of the designed house was found to be positive indicating its stability at floating condition. The angular displacement of the house due to wind action was also calculated and this floating structure would be stable up to the wind speed of 160 km/hr. To provide sanitation the floating toilet can be hinged with the structure. It would definitely give an eco-friendly out look to the structure. For variable fencing, flooring, roofing and floating elements costs were estimated to determine the most economic feasibility. The most economic house was supposed to be made of locally available materials such as chhon and golpata.

Index Term: - Eco Floating Homes, Metacentric Height, Moment of Inertia, Low cost House.

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JCON20_CIVIL_119

Traffic Engineering And Controlling

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Abstract **:** The scope of this paper is to present the initial steps in the implementation of a smart traffic light control system based on Programmable Logic Controller (PLC) technology. We, in this method, intend to measure the traffic density by counting the number of vehicles in each lane and their weight, then park in automated parking or diverge them accordingly. It is also difficult for a traffic police to monitor the whole scenario round the clock. So, this system can be implemented on highways and city traffic. The main object of this study was to design and implement intelligent traffic control system. The system developed is able to sense the presence or absence of vehicles within certain range by setting the appropriate duration for the traffic signals to react accordingly. By employing mathematical functions to calculate the appropriate timing for the green signal to illuminate, the system can help to solve the problem of traffic congestion. Hardware simulation tests were successfully performed on the algorithm implemented into a PLC (programmable logic controller). The new timing scheme that was implemented promises an improvement in the current traffic light system and this system is feasible, affordable and ready to be implemented especially during peak hours, off hours and pedestrians. The PLC checks the status of the sensors. The system resolution is depend on the output provided by the sensors , Then PLC checks the priorities and then provide output signal to the traffic lights poles for ON or OFF the Red, yellow or Green lights and ON time is depend on the specific priorities. The roads are opened in that manner that east road, west road, north road and then south road is open.

Key Words**:** Programmable logic controller (PLC), Weight Sensor, Couters, LEDs, SCADA

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JCON20_CIVIL_120

Rainwater Harvesting By Using Concrete Block Pavement System

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Abstract: Due to urbanization and improper drainage, flooding is a common phenomenon. The pavements and courtyards are presently covered with impervious concrete cement blocks which will not allow rain and drain water to percolate and reach groundwater table. Most of the cities get flooded even with little rainfall due to poor infiltration and drainage. Moreover, these concrete surfaces emit thermal radiation and create heat islands and enhance the global climatic temperature. If paving material is of pervious nature, it will enhance rain water harvesting and will recharge groundwater aquifers below urban areas. But all the available paving materials are impervious and heat emitting in nature, which creates health hazards too. In order to solve this problem, a cost effective, pervious concrete pavement block with a green cover on the top can be made from locally available materials. The more void space in this pavement blocks will allow water to percolate freely downwards and allow grass to be cultured and grown on top of this pavement block other than green aesthetic look and cool eco-friendly environment.

The main aim of our project is to improve the strength characteristics of pervious concrete. But it can be noted that with increase in strength, the permeability of pervious concrete will be reduced. Hence, the improvement of strength should not affect the permeability property because it is the property which serves its purpose.

Index Term :- OPC Cement, compressive strength, splitting tensile strength.

JCON20_CIVIL_121

Comparative study of serviceability requirement for Bubble deck slab with Conventional R.C.C. slab

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Abstract- Bubble deck slab is method in which the concrete from the middle part of the slab is eliminated. That part is not performing any structural function, which leads to reducing the dead load of structure. High density polyethylene hollow spheres replace the in-effective concrete in the center of the slab, it helps to decrease dead load and increase the efficiency of floor. By introducing the gaps, it leads to 30 to 50% lighter slab which reduces the loads on the columns, walls and foundations, and of course of the entire building. The paper also includes the different type of bubble deck slab. With their production as well as advantages over conventional concrete slabs. The geometry of the Bubble Deck slab is defined by, the spheres of a certain size placed in a precise modular grid for a particular overall deck thickness. Bubble deck that it produces floors 20% faster with less formwork and beams, reduces construction costs and agrees with the reduction in concrete use.

Index Term: - Bubble deck, Alternative bubble deck, Deflection

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JCON20_CIVIL_122

Review paper on:effect of metakaolin and basalt fiber in mechanical properties of convensional concrete

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Abstract—Metakaolin and Basalt fiber contain short discrete fibers that uniformly distributed and randomly oriented. Basalt fibers are in increasing demand as they improve the tensile resistance and ductile performance of plain concrete, thus reducing cracking and leading to improve durability of reinforced concrete structure. The main objective is to investigate the mechanical properties of basalt fiber reinforced concrete containing metakaolin as partial replacement of cement. The fibers were placed in concrete by 0.05% to 0.25%.of its total volume of concrete, for mix 5% to 25% of cement is replaced by metakaolin.
Keywards- Basalt fiber, Metakaolin.

JCON20_CIVIL_123

GFRG Panel Housing

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Abstract—In India the demand for housing is increasing and hence there's an enormous growing requirement of building materials because of existing housing shortage in year 2012, the housing shortage was 19 million in urban areas and 44 million in rural India, Thus total estimated housing shortage for Urban & rural India in 2012 was 63 million unit. As per National Real Estate Development Council(NAREDCO) and Mirae Assets Global Investment, this estimated requirement includes total 51 million units additionally in year 2022. So it is essential to find a perfect option for building material to replace bricks or concrete blocks which has the positive aspects of building construction with respect to Time, cost of construction, Strength, affordability energy efficiency over the conventional construction materials and its suitability in the Indian Housing Scenario.To meet this challenge, India requires innovative, energy efficient building materials for strong and durable housing in fast track method of construction at affordable cost. All these concerns are involved in sustainable and inclusive development. Rapid wall Pane provides rapid or faster construction and contributes to environmental protection, providing a solution tomany of the above issues and concerns. Also method of construction using Rapid wall panels based on constructionmanual prepared by IIT Madras to suitIndian situation.The main thing in this project is comparative study on cost and time between wall panels System (GFRG) and conventional building system with the help of estimation and someconstruction management results. In this project we also done the study of GFRG material with respect to properties, advantages over conventional material, suitability in construction, limitations, its element design and mainly cost and time effect on construction.
Key word: - Pre-cast R.C.C. panel's, 3R, fly ash, green product.

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JCON20_CIVIL_124

Study of seismic vulnerability index methods for reinforcment concrete structures

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Abstract— Seismic Vulnerability Assessment estimated by different methods. Estimation of losses due to earthquake is importance for emergency planners and evaluators. For present work, we will look on the Seismic Vulnerability Index method for different types of structure. Existing structure is assessed using Vulnerability Index Method. This method is used to establish a good classification and to allow better description of the Seismic quality of different kinds of constructions. By using this method, structure can also be classified as safe, unsafe or intermediate. Different parameters are determined by post seismic observations and seismic experience feedbacks. The aim of vulnerability assessment is to obtain the probability of given level of damage to a given building type due to earthquake.

Keywords: Seismic Vulnerability Assessment, Vulnerability Index

JCON20_CIVIL_125

Review paper on implementation of green supply chain- a comparativ alysis between small scale industries in india

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Abstract-Environmental pollution is the major problem that mankind faces in present state, the major emission of toxic gases is from vehicles and manufacturing industries. The thesis study focuses on three different types of Small Scale Industries (SSI) in India that are bumper manufacturing industry, dyeing industry and food processing industry. The product life cycles of the process for each industry are identified and their final green waste disposal methods are investigated. The industries are identified with more lean wastes within their product life cycle process. The major green wastes from their disposal methods have high influence on environment. These wastes have to be reduced or eliminated by practicing a suitable supply chain. In present the companies doesn't practice any supply chain in their organization. The implement of supply chain could reduce the environmental pressures and wastes of the companies to some extent. The lean wastes identified in the process could be eliminated by practicing suitable lean tools and methods. The final disposal wastes are considered to be the green wastes. The method of disposal practiced by the SSIs in India shows an evidence of how much they concern towards the environment. The research tries to explain some suitable waste management techniques for the industries and discusses about importance of government role on making this techniques possible. The small scale industries experiences both wastes, so it has to

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integrate lean for practicing green supply chain, the implementation of lean would pay a way for green supply chain management. As a result of it a comprehensive lean and green model is suggested for the industries because the model is composed of both lean and green waste reduction techniques and it also helps in achieving both lean and green business results. Keywords: Green Supply Chain Management (GSCM), Lean Supply Chain Management (LSCM), Waste management

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COMPUTER ENGINEEIRNG

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JCON20_COMP_201

Garbage Monitoring System (IOT Based System)

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Abstract - The traditional way of manually monitoring the wastes in waste bins is a complex process and utilizes more human effort, time and cost which is not compatible with the present day technologies in any way. One of the main drawback with our environment has been solid waste management which in addition to disturbing the balance of the environment also has adverse effects on the health of the society. The detection, monitoring and management of wastes is one of the primary issue of the present era. This is an advanced methodology in which waste management is automated with the help of the IOT. The IOT based Garbage Monitoring system is a very innovative system which will help to keep the cities clean. This system consists of garbage bins having different compartments in it for different garbage type. There will be separate compartment for the waste like plastic, metal, paper and wet garbage. It also it informs about the level of garbage collected in the bins via Android Application and sends notification to the worker.

Keywords— Arduino, Capacitive Sensor, Inductive Sensor, Moisture Sensor, GSM, Server, Conveyer Belt , etc.

JCON20_COMP_202

Review Paper on: Monument Informatics Using Image Processing

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Abstract— Tourism has become an important sector having an impact on development of country economy. For many locales, it is the most important source of welfare. So, in order to guide tourists, there exist many types of tour guide schemes. Among them, traditional guides, paper and mobile based systems are most commonly used for providing tour routes and heritage information for tourists. In the above system tourist needs to visualize what the guide wants to convey about the ancient period or to read the information of the monument. By considering the limitations of above methods, we are proposing an Augmented Reality based Application, which will give tourists an interactive experience by superimposing an informative text, images and video onto the captured view of the monument. The proposed system will be applicable to educational and entertainment industries also.

keywords:- Augmented Reality, Computer Vision, Template matching algorithm.

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JCON20_COMP_203

Implementing Swarm Robotics for Transferring the Object to the Destination

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Abstract: Swarm robotics is a new approach to the coordination of multi-robot systems which consist of large numbers of relatively simple robots which takes its inspiration from social insects. Smart systems give rise to smart environments. Concepts of Artificial Intelligence and Internet of Things make such smart systems more efficient and bring in the idea of automation. In this paper, an attempt to create such a system has been made. The system focuses on an improved version of the Self Organizing multi-robots which communicate with each other to achieve a specific goal. Sometimes a single robot system is not capable to perform a specified task that task can effectively be performed by the multi-robot system. In the proposed system, we implement this theory in small robot applications and compare them for a small automobile prototype using a controller, to provide an output for automatically finish work without any human interaction

Keywords: Swarm Robotics, Self-Organizing robots.

JCON20_COMP_204

A Review On: Profit Maximization In Cloud Computing

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Abstract - cloud computing becoming so popular because it provides computing resources and services to customers on demand and reserved cloud services. Cloud computing is a technology which enables access to configurable system resources and higher-level services over the Internet. The objective of providers is to maximize profits by their price schemes, while the main purpose of clients is to have quality of services for a reasonable price. Thus the vital aim is to maximize the profit for service providers & get quality of service at best price for the client. Because of cloud computing development, choosing cloud services can be complicated & time-consuming for customers. To facilitate cloud service delivery, the authors propose a cloud service broker who provides selection of suitable cloud services, & assure the best performance, reliability, & cost efficiency.

Keywords - Cloud Computing, Cloud Broker, Quality of Service, Efficiency, Reliability, Profit Maximization.

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JCON20_COMP_205

Traceability and detection of counterfeit medicine supplychain through blockchain

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Abstract—In todays era drug safety is very big issue. The main topic is to check the manufacturing process of drugs in the initial stage.The process of production of medicine with distribution to the medicals, hospitals and end users is increasing day by day and therefore billion dollars amount of counterfeit medicines get sell by every year. It is difficult to trace the manufacturing process of medicines to check the right ingredients of medicines and due to fake medicine human life come in danger and it may lead to death also. This paper gives short description of detail working of our system. In this system, we are going to use blockchain to trace the whole supplychain from manufacturing of medicine to distribution of that medicine to wholesaler, distributer and end user.It also provides security,safety and makes the world digital. This also helps to overcome drug safety issue.
keywords:-.Blockchain, counterfeiting, traceability, supply chain management, pharmaceutical industry, security.

JCON20_COMP_206

Review on Secure Data Transmission by Detecting Different Attacks in CRN

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Abstract-Cognitive Radio (CR) is an innovation that vows to take care of the information transmission issue by enabling optional clients to exist together with essential client without making any impedance the correspondence. It plans to improve the use of the radio assets to improve the throughput. Despite the fact that the operational parts of CR are being investigated generally, its security perspectives have increased little consideration. In this work, present a CRN engineering, Different Protocol, with complete rundown of major known security dangers and assaults inside a Cognitive Radio Network (CRN). Our target in this paper is to break down the diverse security issues of the principle late improvements of Cognitive Radio Networks.
Keywords: Cognitive Radio, Cognitive Radio Network, Channel allocation, Protocol, security.

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JCON20_COMP_207

The future of Judiciary and Law in Legal cases using Machine Learning

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Abstract: Now-a-days , number of crimes occurs in the society and this criminal rate increase every day. There is tremendous growth in crimes. Crime has negatively impacted the societies. Crime control is essential for the development of society. Various Law agencies are seeking for the system to understand where, when and why crimes can occur. There is a need for the advance technology in the data storage collection, analysis and using the machine learning algorithm that can handle data and predict the things which gives the result. In the proposed system we are using Machine learning algorithms to predict the punishment and Judgement according to the criminal's crime.

Keywords:-Machine Learning, Prediction, Law Enforcement, Crimes, Text Classification, Case Law.

JCON20_COMP_208

Attendance System Using RFID and Fingerprint with Location Detection

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Abstract: Attendance is a must for students. Without the attendance process, the lecturer or teacher cannot assess the participation of a student. But in the process now, attendance is still done manually using paper. Where later the paper will be signed by students. But this will cause problems. The rest problem is the use of excess paper and the second problem is the difficult for the administration to recapitulate student attendance results. This is because so many attendance papers must be analyzed by the administration. Therefore, a student group action system is required which will collect knowledge quickly, efficiently and accurately. This student attendance system is done by conducting data assortment, system analysis, system style, and system implementation. This system is created using the Java programming languages. The System is also using RFID to mark the attendance and also to get the location of the student in the campus. It is expected that the attendance process will be more efficient and can be easily monitored by lecturers and by the central administration.

Keywords: Location, Fingerprint Scanner, Sensors, Electronic passive wave.

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JCON20_COMP_209

Hydroponic Green fodder system in limited space using IOT

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Abstract— Livestock leads good agriculture household income in rural India and plays important role in lives of particularly small and marginal farmers and landless persons. Green fodder is important inputs in dairy as it provides required nutrients for milk production and also helps maintain the health of dairy animals. Hydroponic Green Fodder System in limited space can be implemented using IOT. Hydroponics is the method of growing plants using only water nutrients and a growing medium. To grow good quality fodder it need to control the temperature and humidity.This System can be implemented effectively with sensors such as moisture sensor. Arduino UNO, pH meter will be used. Android app will be developed for communicating with hydroponic system that reduces the human efforts. User interface can be developed with python language to handle the system. System will reduce man power.

Index Terms— Hydroponic, Arduino UNO, Sensor, Fodder Tray, Smart Farming

JCON20_COMP_210

Implementing Smart Card For Accessing Medical History Using QR Code

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Abstract - In medical management, more and more information technologies are applied to improve work efficiency. For example, the hospital information management system is used to carry out a patient's basic information and medical management, the wrist one-dimensional QR Code is employed to quickly read or input a patient's identity (ID) and so on. Information technology brings convenience while at the same time there are certain secure drawbacks in several typical scenarios because of immature technology or management vulnerability, such as, the X-ray transparency leaks user privacy, access to look at the medical privacy record is not strictly controlled, infusion confirmation is without technical authentication, patient wrist ID is simple to be forged, payment is not convenient and so on.

However, deploying new technologies in healthcare applications without considering security makes patient privacy vulnerable and emergency access or patient information. The physiological data of the patient is highly sensitive. The main contribution of this paper is to storing patient's data securely and analysis on the patient data without compromising the patient's privacy and store data in Quick Response Code which help to access patient information in case of emergency at hospital and Insurance department.

Keywords— Information Security, Healthcare System, Insurance department, Quick Response Code, Patient's identity (ID) and Security, etc.

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JCON20_COMP_211

Threshold Cryptography Mechanism in Cloud Computing

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Abstract— Now a day's cloud computing is more popular in large and small scale organization as it will stored large amount of data and provide low cost service. Hence it was create daily new challenges to provide secure authorization, integrity and access control. Some approaches are ensuring about security but there are also some lack in these approaches and issues due to collusion attack, heavy computation. To resolve this issue we proposed a scheme its threshold cryptography in this data owner can divide users in group and provide single key with the using key each user in group can access the data. In these studies to control access we use capability list. In this scheme not only provide data security but also provide reduce number of keys.

Keywords—Cloud computing, Outsourced data, Access Control, Malicious outsiders, Authentication, Threshold Cryptography, Capability list.

JCON20_COMP_212

An Adavnced IoT-Based Food Quality Monitoring Approach Using Low –Cost Sensors

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Abstract-Over the past decades, the evolution of multi-purpose sensors has been investigated with the aim of developing innovative devices with applications in several technology fields, including the food industry. Integrating such sensors into food storage technology has paved the way for smart food storage. Throughout their processing time, these integrated systems are able to provide reliable information about the performance of the packed goods.Smart packs use a number of sensors to track the quality and safety of food products by monitoring the evolution of parameters such as the quantity of pathogenic agents, chemicals, temperature, humidity, and processing time to achieve this goal. Combined with IoT, this system can provide much more data than conventional food inspection systems that are limited to inspection of weight, size, color and dimension. The original program mentioned in this work was based on a simple but effective method of automated food tracking at the customer's home, suitable for vacuum-packed foods cooked by the consumer. This draws on the idea of IoT and can create an integrated computer network. By using this approach, in sharing information across networks, we are able to combine actuators and sensing instruments that also provide a specific operating picture (COP). More specifically, our system consists of sensors for fuel, temperature and humidity, supplying the essential information required to determine the packaged product's performance. Such information is transmitted wirelessly to a computer system that provides an interface that allows the user to track the product quality progression over time.

Keywords-Arduino,DHT11Sensor,MQ3 Sensor,Fire Sensor,LDR Sensor,ThingSpeak Server etc.

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JCON20_COMP_213

Location Based Notification System for Bus Tracking & Parking for Android Devices

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Abstract—An android application is developed for friendly suggestion and notification. If a friend is about 1 kilometer away, the user is notified on a mobile phone. The mobile device triggers an alert when the user sets location on a map and a user reaches the specified zone. Register Shops Offer Alert-when you reach some zone, the client can report deals to such shops if this field shops are entered in the registry. A client position (using GPS or LBS) is constantly being sent to a mobile. The Admin Panel includes an organizational account for shop which adds and removes offers for shop. Shop managers may attach deals to a panel using the credentials. Bus monitoring and parking are planned by the system. Services based on location (LBS) provide tailored services for mobile users, based on their current position. In addition, system open up a new field for developers, network operators and service providers. Live Monitoring helps determine the current location of the bus or parking zone, thus improving the efficiency and protection of most commercial vehicle fleets.

Keywords-component: parking system, online shopping, LBS, GPS

JCON20_COMP_214

Implementation of House Price Prediction Model Using Image Processing & Machine Learning

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Abstract— The pricing of house not only depends on the size of the property and no. of rooms, but also on the neighborhoods like transport facility, banks, schools or colleges, shops etc. When a person buys a home, they considers structural features, working accessibility, neighborhood services. While purchasing the house, the price of house is the main factor which is considered by people. Hence, a house price prediction system is invented to improve estimation of house prices. This system presents a House Price Prediction using Image Processing and Machine Learning. The system gives comparison of prices of house at particular location for customers. It also gives comparative pricing rates to builder so that he can estimates his construction budget to compete with other builders at that area. The satellite images have been used to visualize impression of neighborhood. The Image Processing is applied to satellite images and Machine Learning algorithm Convolutional Neural Network(CNN) and Linear Regression is used for

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estimation of house pricing. The project is purpose to predict price of houses at particular area to people and builders.

Keywords: Convolutional Neural Network, Feature Extraction, House price prediction, Image Processing, Linear Regression, Machine Learning, Preprocessing.

JCON20_COMP_215

Remote Data Management for Educational Information System (IJCTE)

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Abstract— Initially, we methodize our proposed management system via a hierarchical structure, which contains (1) Web display layer, (2) Business logic layer, (3) Data access layer, and (4) Database layer. Secondly, management system is described, and several elements are included in it, such as faculty information, department information, major information, class information, student information, course information, manager, employment information, comprehensive score and course type.

Index Terms— Cloud Computing, Data mining, Educational Management Information System. Keywords-component; formatting; style; styling; insert

JCON20_COMP_216

Personalized Referral Service and Big Data Mining for E-commerce with Machine Learning

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Abstract— Artificial intelligence can learn and interpret large quantities of information and make decision-making. It software is now used by E-commerce to identify patterns dependent on shopping, purchasing experience, credit checks, account data etc. The data collected are then the basis for the preparation of individual customer recommendations. Google and Microsoft invest in new AI projects now. Most e-commerce firms have begun to use various forms of AI in order to better understand and provide their consumers with an enhanced experience. In this article, we take as an example the e-Commerce data of the tea system business, use the FP-growing algorithm to obtain the frequent item set so as to mines and evaluate association rules for UR actions so as to obtain functional vector as the basis of the classification of UIs. Finally, by making a profit on the sale of products, we test the feasibility of big data mining with ML.

Keywords- big data, ecommerce, machine learning

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JCON20_COMP_217

Nymble: Blocking Misbehaving Users in Anonymizing Networks

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Abstract- Anonymizing networks such as Tor allow users to access Internet services privately by using a series of routers to hide the client's IP address from the server. The success of such networks, however, has been limited by users employing this anonymity for abusive purposes such as defacing popular websites. Website administrators routinely rely on IP-address blocking for disabling access to misbehaving users, but blocking IP addresses is not practical if the abuser routes through an anonymizing network. As a result, administrators block all known exit nodes of anonymizing networks, denying anonymous access to misbehaving and behaving users alike. To address this problem, we present Nymble, a system in which servers can "blacklist" misbehaving users, thereby blocking users without compromising their anonymity. Our system is thus agnostic to different servers' definitions of misbehavior — servers can blacklist users for whatever reason, and the privacy of blacklisted users is maintained.

JCON20_COMP_218

Automated Intelligent Wireless Drip Irrigation System Using Linear Programming and Interpolation Methods

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Abstract— Drip Irrigation is today's need because water is nature's gift to the mankind and it is not unlimited and free forever. World's water resources are fastly vanishing. The one and only one solution to this problem is automated Drip Irrigation system. In the field of agriculture, use of proper method of irrigation is important and it is well known that irrigation by drip is very economical and efficient. In the conventional drip irrigation system, the farmer has to keep watch on irrigation timetable, which is different for different crops. In Automatic microcontroller based drip irrigation system irrigation will take place only when there will be intense requirement of water. Irrigation system uses valves to turn irrigation ON and OFF. These valves may be easily automated by using controllers and solenoids. The purpose of this paper is to provide more facility in agriculture field by using wireless sensor network along with linear programming. Paper describes an application of a wireless sensor network for low-cost wireless controlled and monitored irrigation solution.The developed irrigation method removes the need for workmanship for flooding irrigation as well as drip irrigation. use of linear programming help us to distribute available water to the crops if and only if there is immense need of water to

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the crop in order to get maximum profit with minimum cost. Also linear Programming helps us to do proper management of available water.

Index Terms— Irrigation- Surface, Drip, Wireless Sensor Network, Real Time Monitoring, Automation.

JCON20_COMP_219

Identifying students performance using E-learning System

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Abstract-Recognision of Students performance beforehand can be very beneficial for educational institutions to improve their teaching quality,teaching content[2].When instructors do receive inadequate feedback concerning a course, the result can be that students fail the course, drop out, or get a lower grade on the final exam. This paper proposes to predict students performance by considering their students data. We are use the classification algorithm to predict the performance of student. Educational organizations are unique and play important significant role for the development of any country. As Education transforms the lives of individuals, families, communities, societies, countries and ultimately the world![4]. This is why we live comfortable lives today. Now a day's education is not limited to only the classroom teaching but it goes beyond that like Online education System, Web-based Education System, Seminars, Workshops, MOOC course[7]. becomes It's more challenging to Predict student's performance because of the huge bulks of data stored in the environments of Educational databases, Learning management databases[5]. Students' performance can be evaluated with the help of various available techniques[1].It is evolving area of study that emphases on various techniques like classification, prediction, feature selection[11]. In addition, the result show that employed on learning records or data related to education to predict the students' performance and learning behavior by extracting the hidden knowledge.

Keywords- Performance Prediction , Machine Learning, Classification, Predictive Model, Database, Classification algorithms.

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JCON20_COMP_220

Implementation of IDS (Intrusion Detection System) for Home and Banks

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Abstract—Video surveillance is used to detect the activities going in the surrounding. But how can we know without interfering physically with the system is there Intrusion or not, this can lead to a severe attack on our surrounding and thief takes advantage of this insecure system and robs the place. To avoid this condition, we are implementing a system which is dependent on Intrusion Detection System and Image processing. In this system the image obtained in real time is compared with the database and accordingly the admin is being warned. This Paper consist of Intrusion Detection System(IDS) which detects the thief and unauthorized person in the room with surveillance system or the cameras which may be the bank server room which will track down the unauthorized user in the room and send the alert message to the authorized user/admin. For Home the Intrusion Detection System(IDS), will be activated by the user when needed say at night or when nobody is not at home. When, there will be suspicious activity by the unauthorized person in the surveillance camera the SMS will be sent to the admin/authorized user.

Index Terms—Grabbing, Intrusion detection, Viola-jones, YOLO.

JCON20_COMP_221

Transflower Smart Agriculture Drone Spray System

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Abstract - The main objective of this project is to design and manufacture a Quadcopter which can be used for the Smart agricultural purpose. The main aim of this project is to reduce human efforts in agricultural surveillance and spraying pesticides, fertilizer and herbicide on agriculture land. We propose an architecture based on Quadcopter for agricultural applications where Quadcopters are responsible for Autonomously spraying chemicals pesticides, fertilizer and herbicide on crops. An algorithm will be evaluated the Quadcopter route. Autonomously controlled drones are pre-programmed flight plans or more complex dynamic automation systems, where humans are not involved in the actual operation. These plans are developed in advance, but are individually realized afterwards. The technology needs to be involved to improve agriculture. Agricultural Business Performance is increase by using Smart Agriculture Drones.

Keywords:-Quad-copter, GPS, Ultrasonic Sensors, IR Sensors, Raspberry pi.

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ELECTRONICS AND TELECOMMUNICATION ENGINEERING

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JCON20_ETC_301

Comparative study of DES and AES algorithm Implementation using VHDL:Review

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Abstract— In the course of recent years, cryptographic algorithms have gotten progressively significant. In the year of 1975 DES and in the year 2000 AES algorithm was invented. A data storage requirement increases as the growth of the computing and network technology increases. Data Security becomes a critical issue in electronic communication. It uses some algorithms to shuffle data into unreadable text which might be only being decrypted by other party those having the associated key. This algorithm requires a major amount of computing resources such as memory and battery power and computation time. This paper accomplishes comparative analysis of encryption standards DES, AES considering various parameters such as computation time, memory usages. AES is broadly received because of its simple usage and powerful security. Comparison between DES and AES algorithm was elaborated in this paper along with VHDL Implementation.

Keywords—Cryptography; (DES) Data Encryption Standard; (AES) Advance Encryption Standard; FPGA; VHDL

JCON20_ETC_303

Automatic Geyser Control System

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Abstract - Since water heating, now a days It became a one of the basic task of our everyday life. Water geyser is used for heating water, where the electric energy is converted as heat energy; this energy conversion is used to increase the normal temperature of water. The main usages of geyser are many bathing, washing, cooking and etc. So it became public demand, the challenge of the system is to make this system affordability with good efficient and convenient to handle with less erroneous. To hold its performance as well as cost, we need to design such a system that will provide us with exactly how we expect it to be. In this paper we professed such an alternative system for older one and named as a smart water geyser; which will satisfy the public demands with interesting decorative features. We analyzed how human body shall interact to different temperature levels of water & the water heating system would serve according to the need of a person as well as this system will prevent overheating, less temperature challenging plumbing system. This system handled the outburst of pipes or heater coil due to overheating.

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Our professed water heating system also can make its own decision on boiling status of water by sensing consumer's presence.

Keywords—geyser, smart, efficiency, temperature, water

JCON20_ETC_304

INTELLIGENT CARGO MANAGEMENT SYSTEM USING ARDUINO

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Abstract-The role of Internet of Things (IoT) and its impact on Cargo Management System (CMS) through an extensive literature review. Important aspects of IoT in CMS are covered including IoT definition, main IoT technology enablers and various CMS processes and applications. We offer several categorisation of the extant literature, like supported methodology, industry sector and specialize in a classification supported major supply chain processes.

In Cargo Management System the transportation of perishable agricultural products, medicines effectively plays a vital role in the sustainability of the entire process. It is also to be noted that the majority of the post- harvest wastage occurs within the transportation phase. In this paper we propose a system to optimize the transportation of the perishable products. Sensors is employed to watch the physical and environmental conditions like temperature, humidity, position of cargo there by enabling these low power devices to be a part of the Internet of Things (IoT).

Keywords-Internet of Things (IoT), Real-Time Systems, Arduino Atmega328P, Temperature Sensor, GPS Module, GSM Module.

JCON20_ETC_305

Object Detection and Recognition for Blind Assistance

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Abstract- The aim of this is to explore different methods for helping computers clarify the real world visually ,investigate solutions to those methods offered by the open source computer vision library, OpenCV and implement some of these in a Raspberry pi based application for detecting and keeping path of objects. The main focus rests on the practical side of the project. The result of this thesis is a GNU/Linux based C/C++ application that is able to detect and keep track of object by reading the pixel value of frame captured by the Raspberry Pi camera module. The application also transmits some useful information, such as coordinates and size to other computers on the network that send apropos query.

Keywords- Object detection, object recognition, data set, data analysis, histograms, neural networks.

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JCON20_ETC_306

Staircase Cleaning Robot

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Abstract— many a times repetitive work is very irritating for which we always think of some alnother option to get rid of such work or outsource the work or hire someone to do such non-productive work. However the above options are not always feasible or economical. Hence we have identified a idea to get rid of such non-productive work by means of robotic automation. Staircase cleaning job is one such a work where most of the time and energy is required in which people might not be interested in doing rest of their lives. The Staircase cleaning robot is one such innovative idea wherein the time and energy of human beings will be saved in doing such repetitive and non-productive work. The innovation can extensively be deployed not only at home but at various places like public buildings, educational institutions, government organizations, corporate buildings etc.

Keywords — non-productive work, robotic automation, staircase cleaning robot, corporate buildings.

JCON20_ETC_307

IOT Based Smart Helmet

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Abstract — A smart helmet is a special idea which makes motorcycle driving safer than before .It is a way to stop starting of vehicles without wearing helmet or even if the driver is drunked. In addition, it has a great attribute of detect accidents and informs specific people via SMS with location and speed of the bike before the accident occurs with the help of GPS and GSM based tracking system, thus aiding ambulance to reach the correct location. We want to implement all the sensors within the helmet, which will send the information to the module connected with the bike engine wirelessly. This smart bike helmet system will have two modules, one on the helmet and another one on the bike. Alcohol sensor and helmet sensor (i.e. switch) are attached with the helmet module and vibration sensor, GPS and GSM are connected with the module on the bike. The set modules communicate wirelessly using RF transmitter and receiver with encoder and decoder, using Arduino.

Keywords—GPS, GSM, Sensor, Smart Helmet.

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JCON20_ETC_308

Bridge Safety and Flood Detection System

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Abstract -The heavy floods can be so disastrous that the infrastructure is washed away, the people and the animals drown, and the people can be stranded for long periods. The society and the economy of the country will suffer in various ways later the flood .The loss of the lives, the vegetation, and the infrastructure. In this project real-time safety evaluation of bridges includes the following components: (1) real-time analysis of detection of cracks.(2)real time analysis of Water level.

Keywords Sensor, early warning system, GSM.

JCON20_ETC_309

Brainwave Authentication Security System

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Abstract-Door locks operate through indistinguishable journeys yet being the most common part of life. If anything, luxurious is possessed by someone then there are chances of it liked by the others which gives birth to theft. Numerous countries of the world show an enormous amount of money and time spent in the Anti-theft systems yet those are not up to the point. The upcoming research exicute brain waves and DNA matching as the era concept that observe the activity in short spams of time there by providing continuous security. Brain waves are operate using maintaining a analyse database alongside comparison to live activities of brain waves capturing there by enhancing the security. Brain emits rays of the different spectrum which are alpha betagamma rays, to identify these spectrums can be analyzed as per the different situation of the brain in every human body. With the help of these generated signals are we control the hardware part that is controlling ofthe door lock system.

Keywords-EEG sensor, ARM11, servomotor, pressure sensor.

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JCON20_ETC_310

Solar Powered Recharging Station For Electric Vehicles

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Abstract— India is one of the top ten automotive markets in the world today n China, the power sector is currently the largest carbon emitter and the transportation sector is the fastest-growing carbon emitter. Paper represents a model of solar-powered charging stations for electric vehicles to mitigate problems encountered in China's renewable energy utilization processes and to cope with the increasing power demand by electric vehicles for the future and having highly increasing middle class population with buying potential and the steady economic growth. But petrol price has increased substantially in various different steps in last few years. Alternate technology in automobile industry is Electric Vehicles (EV). Initial investment is around 1.5 times than conventional IC engine, but time has come when cost of environment is now more of concern than the cost of vehicle. National government is focusing on R&D and consumer incentives, whereas city governments are supporting infrastructure deployment locally through public-private partnerships and other programs. A major feature of Electric Vehicles is that drivers can switch them in to charge from an off-board electric power source. All-electric vehicles run only on electricity. All-electric ranges of 100 to 200 km, while a few luxury models have ranges up to 500 km. When the battery is discharges, it can take from 60 minutes (with fast charging) up to nearly a full day (with Level 1 charging) to recharge it, depending on the type of charger and battery. Hence it is highly required to have recharging stations at various places to recharge the EVs aiming for long distance travelling. Recharging stations based on solar system is one of the best solution for this recharging station needs from environmental friendly point of view? As per the purpose of EVs should not be defeated from conventional electricity source.

Keywords — battery,electric vehicles, recharging station, solar

JCON20_ETC_311

Fire Monitoring System

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Abstract— In fire monitoring system project, the built fire alarm using Arduino Uno which is interfaced with a temperature sensor, a smoke sensor and buzzer. The temperature sensor senses the heat. Smoke sensor sense any smoke generated due to fire. Buzzer connected to Arduino gives an alarm indication. Whenever fire trigger, it burns objects and produces smoke. A fire alarm can also trigger due to smoke from oil lamp used in household. Whenever heat

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intensity is high then alarm goes on. Buzzer is turn off whenever temperature goes to normal room temperature and smoke level reduce. Technological device are available which provide refuge for all mankind. Security and automation is prime concern in our day to day life. The approach home and industrial automation and security system design is almost standardized now a days.

Keywords— Buzzer, Efiiciency, Smoke, Temperature.

JCON20_ETC_312

A microstrip patch antenna design used for Wimax network: Review Article

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Abstact: In the last decade, several microstrip patch antenna designs that meet various objectives have been proposed for use in Wimax networks. In various electronics gadgets, microstrip patch antennas are generally used for communication because of their light weight and tiny planar structure. A generalized and common patch antenna are rectangular or circular in shape, but variations in their shape and use of different parasitic material can change the design for different purpose. This paper Concentrate on the basic issues required to design microstrip antenna with an explanation and discussion. To aim a tiny size with minimum radiation and harmonic rejection with reconfigurability. Finally, circularly patch microstrip with different structured are evaluated and compared with a prominence on the various methods adopted to obtain a miniaturization antenna, high bandwidth and harmonic rejection functionality.

Keywords: Microstrip antenna, bandwidth, harmonic rejection, miniaturization.

JCON20_ETC_313

IOT BASED CLASSROOM ATTENDANCE SYSTEM

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Abstract — Every society it be an educational institution or business organization,it has to maintain a accurate record of attendance of students or workers for effective functioning of organization. Designing an attendance management system for students to maintain the records with ease and accuracy is an important key behind motivating this project. Nowadays attendance is taken on paper and records are maintained were someone keeps all the

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records and does all the calculations at the end of the month due to which is takes time and students have to wait till month end to know their attendance. This system would improve accuracy records of attendance because it will remove all the problem of roll calling and will save time of the students as well as teachers.

Keywords— accuracy, attendance, records, students, time.

JCON20_ETC_314

PLC-SCADA Based Medicine Ordering System

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Abstract— a pharmacy is a retail shop which provides prescription drugs, among other products. At the pharmacy, a pharmacist oversees the completeness of medical medicine and is available to give advice on their offerings of over-the-counter drugs. A typical pharmacy would be in the commercial area of a society. To help pharmacists be able to take on extended roles, it is common for them to work as part of a team that can include pharmacy technicians, distribute assistants and counter assistants. However there is an unusual trend that the customers will rush at the pharmacy stores at specific hours in the morning and the evening. 20-30 % customers will be queuing for general medicines like Vicks – VapoRub, Iodex – ointment, deodorant sprays, sanitary pad, protection etc for which dispensing assistants can handle without any issue with the help of PLC/SCADA based ordering system.

Keywords—pharmacy, PLC, SCADA, ordering system

JCON20_ETC_315

Detection of Various Stages of Brain Tumor Using Convolutional Neural Networks

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Abstract— Brain tumor identification is really challenging task in early stages of life. But now it became advanced with various machine learning algorithms. Now a day's issue of brain tumor automatic identification is of great interest. In Order to detect the brain tumor of a patient we consider the data of patients like MRI images of a patient's brain. Here our problem is to identify whether tumor is present in patients brain or not. It is very important to detect the tumors at starting level for a healthy life of a patient. There are many literatures on detecting these kinds

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of brain tumors and improving the detection accuracies. In this paper, we Estimate the brain tumor severity using Convolutional Neural Network algorithm which gives us accurate results.

Keywords- Brain tumor, magnetic resonance imaging, convolutional neural network, segmentation, Gaussian Filters

JCON20_ETC_316

TVCCCS: Television Viewer's Channel Cost Calculation System

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Abstract— 'Television viewers channel cost calculation system (TVCCCS)' monitors user's channel watching time in seconds and charged according to channel usage. TVCCCS is specifically defined to give benefit of watching various broadcasting channels, to common user. User will be charged as per their usage on viewing every channel every day per second basis. This has been done with the help of a programming card mounted inside the set top box of the viewer's side. It calculates amount of time in seconds of every channel which user views every day and converted into the total amount at last of the month or a day. Timer is fixed to count amount of watching time in seconds. This amount is deducted from the main balance which is initial recharge of the user. This will continue till main balance lasts. Also this calculated amount will be sent to the Channel Transmission Company and end user through internet or Wireless communication/satellite IoT or mobile chip placed inside the set top box because of which two way communications has been done. Also this whole remaining amount or charged amount summary displayed on the television screen to view in the message folder. So that user will come to know when to recharge for next time. Proposed technology provides one more facility which defines; user can be able to select channels as per user demand or use rather than company channel packages. User can select the channel through their registration id and will be informed to the Channel broadcasting Company, this user data stored in the company's database. This information next forwarded to broadcasting satellite which will broadcast only selected channels. Proposed system also focuses on activation and de-activation of selected channel. When User views any channel that time that channel will be activated and other channels are de-activated. This is also done with the help of broadcasting Channel Company and satellite. Satellite will broadcast only selected channel at that time to that particular user according to transmission company guide. TVCCCS will be used for the common people to get rid of from unnecessary and extra amount of charges from various channel broadcasting companies.

Keywords—TVCCCS, Channel Transmission Company, television screens, broadcasting satellite, Wireless communication/satellite IoT and mobile chip.

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Performance Analysis Of Encrypted Data Hiding In Encrypted Image

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Abstract- The security is a big threat in the transmission medium due to the development of the Internet and multimedia contents such as audio, image, video. The existing system is non-separable reversible data hiding in encrypted image in that we can hide the secret data in one or two bits of an image but we hided the secret data in three or more bits of the image, its quality becomes low and the human eye can detect the changes in the image. Hence its data carrying capacity and the tamper resistance or security is low. So existing system has some limitations to overcome these limitations we propose separable and reversible encrypted data hiding in encrypted image using AES algorithm. AES Consist of 128 bits fixed block size and key size of 128, 192 or 256 bits.
Keywords- AES, reversible data hiding (RDH), image encryption, encryption key, data hiding key, image decryption , LSB replacement, MSE, PSNR

JCON20_ETC_318

Traffic control by Movable Road Divider

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Abstract-Road Divider is generically divides the Road for ongoing and incoming traffic that helps keeping the flow of traffic; generally there is equal number of lanes for both ongoing and incoming traffic. The matter with Static Road Dividers is that the amount of lanes on either side of the road is fixed. Since the resources are limited and number of cars per family is increasing, there is vital increase in number of cars on roads. This needs for better utilization of existing resources like variety of lanes available. As an example, in any town, there is industrial area or shopping area where the traffic typically flows in one direction within the morning or evening. The opposite side of Road divider is usually either empty or a lot of underutilized. This is often true for peak morning and evening hours. This result in loss of time for the car owners, traffic jams moreover as underutilization of obtainable resources. Our aim is to formulate a mechanism of automated road divider which will shift lanes, so that we can have number of lanes within the direction of the rush.
Keywords- Ultrasonic sensors, Arduino Uno board, Wi-Fi module

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A Comprehensive Review of Approaches and Techniques for 2D-to-3D video Conversion

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Abstract—subsequently consumer electronic products grow swiftly; 3D display expertise becomes prevalent in past years. Stereoscopic three-dimensional content is the state-of-the–art and further most influential inclination in the cinema, television, Blue-ray, internet sreaming, video on demand, advertising, and broadcasting markets, with accumulative potential for the subsequent decades. Up till now numerous scientist and researchers have proposed diverse approaches to adjacent this breach. Principally, these SVC and adaptation procedures are characterized in an automatic method and semi-automatic technique. There are discrete features that can be well-thought-out during conversion, like for video conversion motion is typically considered constraint; although for image conversion local attributes of images were measured. Computational time and design cost are the foremost design metrics that should be considered while conniving algorithm. In this review paper, the most recent undertakings and background in converting monocular video footage to their stereoscopic or Multiview counterparts for display on 3D visualization technology are deliberated.

Keywords—video conversion;2D-to-3D video conversion,depth estimation,3D video

JCON20_ETC_320

A Zigbee Based structural constraints Special care system

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Abstract— The paper represent for the patient abnormality or patient dieses. For the structural constraints is body temperature , ECG, HIV parameters by using the following temperature sensor sense the body temperature and send the signal to the LPC 2148 that sense the signal to LCD and the same is displayed on PC. The heart rate sensor sense the heart bits produces analog output voltage for the external circuit processing or display. The entire system can be easily used track the various constraints of the patients. The low cost of the device, lowers the cost system for revolving patient problem.

A LPC 2148 is used for analyzing the inputs from the patient and any abnormality felt by the patient causes the monitoring system to give an alarm. Also all the process parameters within an interval selectable by the user are recorded online. This is very useful for future analysis and review of patient's health condition. For more versatile medical applications, this project can be improvised, by incorporating blood pressure monitoring systems, dental sensors and annunciation systems, thereby making it useful in hospitals as a very efficient and dedicated patient care system.

Keywords— LPC 2148, Zigbee, ECG, HIV

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MECHANICAL ENGINEERING

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JCON20_MECH_401

Review paper on design and analysis of composite drive shaft

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Abstract – In automobile in day to day running number of components were worn out or failed due to some material physical and mechanical properties or their compositions. This project deals with the design and material optimization of an automobile component. For this purpose, the drive shaft is selected in which both material and design optimization is being conducted. In this firstly prepare the Creo software based model of propeller shaft and then will be import in ANSYS for FE analysis. Then the design of this shaft is altered and analyzed under same material and boundary conditions. Now this modified shaft analyzed with composite material under same boundary conditions.

Keywords: - material optimization, drive shaft, composite materials.

JCON20_MECH_403

Design and Modification of Shock Absorber Test Rig.

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Abstract - Shock absorber device is generally used in all automobiles. It is an example of under damped vibration system which absorbs maximum amount of kinetic energy and sometimes potential energy. Main purpose of our research is to measure transmissibility of shock absorber and to analyze it for different loads and speeds. Effectiveness of the vibration can be measured by transmissibility and for measurement of transmissibility shock absorber test rig is designed and developed. An experiment on test rig is carried out at various loads and speeds which results to output in the form of sinusoidal waveform on digital display of the computer integrated system using FFT analyzer. The waveform is used to find out the transmissibility at various load-speed combinations. The system obtained waveform shows the behavior of shock absorber at various speeds and loads.

Key Words: Amplitude, FFT Analyzer, LVDT, Load cell, Dynamic Characteristics.

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JCON20_MECH_404

Solar Dryers with Thermal Storage: A Review of Solar Thermal Application

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Abstract-Solar thermal technology is rapidly getting importance as an energy saving measure in agriculture application. This paper focuses on particular direct thermal application of solar energy for drying the vegetables. Out of is direct solar dryer and indirect solar dryer, in review it is found that indirect solar dryers are more suitable and also gives better quality of product. It is found that dried product quality and drying efficiencies also depends on other drying parameters like air velocity, temperatures, etc. Different modifications in indirect solar drying processes and their design are compared.
Keywords: Solar dryers, desiccants, solar collectors, drying chamber, etc.

JCON20_MECH_405

Protection to Underwater Shock Wave Mitigation by Multilayer Armour

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Abstract—Exploding concentrated underwater charges to damage underwater water structures such as ship hulls is a part of naval warfare strategies. Impact of this underwater explosions cannot be withstand by ship hulls made up of conventionally used materials and this results into destruction of hulls, serious damage to electronic equipments, lowering combat properties of battle ships, and numerous injuries or death of crew members. So for the next generation of ships navy is looking for stealthier and blast resistant hull technologies like composite materials to replace conventionally used materials. This research proved that multilayer i.e. Sandwich panel of AL , rubber, foam have better mitigate shock wave and less mass compared to conventionally used AL plates and this composite material can acts as a armour for naval vessels to protect them from underwater explosions.
Keywords— Armour, Underwater Explosion, Nonocomposite, Pressure sensor, Strain measurement

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JCON20_MECH_406

Experimental Evaluation of Clutch Plate Material by Tribological Properties Using Trobometer

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Abstract—Automobile Clutch plates performance on contact conditions at the pad to disc interface at contacting surfaces. The aim of this study is to analyze the effect with different material composition on friction & wear of Clutch Plate material. The review of paper is to represent a general study on the alternative material for the clutch & Clutch plate material. Instead of the conventional material if we used the composite material the cost, weight can be reduced and the life of that brake material can be increased in low cost. We can combine the two or more material and from that one material can manufactured and that material shows the superior properties of that combined material and eliminate the non requited properties. The energy dissipation and mass loss of friction materials linearly increases with increasing sliding distance. The work of the composite materials are synthesized containing fibrous reinforcing constitutes ,friction imparting additives ,wear resistive additives ,fire regarding constituents and phenolic resins as binding material. Apart from synthesise, the synthesized composite material characterization were performed with wear test to find generation of voids on the wear surface.
Keywords—Clutch, Friction Materials, Composite Materials.

JCON20_MECH_407

Review Paper on Cold-pressed oils as functional food

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Abstract—- In this paper the feature of useful food, cold- pressed oils and the method of its extraction were described. The factors affecting the quality fields characteristic of the obtained oils were discussed. The nutritionally valuable bioactive elements of cold-pressed oils were presented such as: tocopherols, sterols, carotenoids and phospholipids with oxidizing properties partly removed from refined oils or destroyed during the industrial refining. Their health advantageous properties and mode in fat processing technology were described.
Keywords— Human health, Wellness, Edible oils, Nutrition, diet

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JCON20_MECH_408

A Review on Biomass Energy Resources Utilization and Waste Management

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Abstract—This This Article discusses a comprehensive review of biomass energy sources, environment and sustainable development. This includes all the biomass energy technologies, energy efficiency systems, energy conservation scenarios, energy savings and other mitigation measures necessary to reduce emissions. The current literature is reviewed regarding the ecological, social, cultural and economic impacts of biomass technology. This article gives an overview of present and future use of biomass as an industrial feed- stock for production of fuels, chemicals and other materials. However, to be truly competitive in an open market situation, higher value products are required. Results suggest that biomass technology must be encouraged, promoted, in- vested, implemented, and demonstrated, but especially in remote rural areas.
Keywords: Biomass Energy Sources; Resource utilization; Waste Management
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JCON20_MECH_409

Design of Transmission System of Effi-Cycle

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Abstract- These project describes in details the design and selection of effi-cycle transmission system. It describes the how can we reduce the weight and increase the efficiency of transmission system. The effi-cycle is operated by the human power hence we have to make it light weight. We have focused on the simplicity of the transmission system with comfort for the driver. Most of the components are used keeping in mind for their easy availability. As in this system total power transmission is manual so it is also totally pollution free as well as less noise producing. All these things together make this tricycle more efficient and eco-friendly than other. In these project we provides in details about the design and selection of steering mechanism, suspension, chain and sprocket, shaft, bearing, disk brake about effi-cycle used in designing and developing it. By using theoretical design procedure and assuming impact we select the components of system.
Keywords- transmission, effi-cycle ,efficiency, comfort, eco-friendly.

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JCON20_MECH_410

Design, Development and Analysis of Tank for Pulp/Wax type Food Industry

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Abstract-Wax melting is the most important process in industry in order to prepare a final product. While preparing that product it is necessary that to melt a wax in proper amount as well as the required condition. During melting of wax or pulp because of high temperature more amount of thermal stresses are developed and when that thermal stresses are exceeds certain limits then the welding section get weak and because of that there will be leakages problem at joint so that loss of thermal energy through joints. But if we design the tank for wax melting by applying the seamless welding process we are easily avoid those leakages at the joint. So there will be a need to design a tank by seamless welding process to avoid the thermal loss and reduce the thermal stresses. So in this paper we try to complete the design according to actual design dimensions and try to prepare the designed model with the help of catia software. After preparing that tank with that software I try to complete whole analysis with the help of ansys software . This analysis will be carried in order to get equivalent stresses, maximum principle stresses and the total deformation of the assembly. Also from the design and analysis it is clear that it is clear that the selected wall thickness of 5mm will be on safe side so there will be a optimization of thickness.Keywords: Wax Melting, Analysis with Ansys, Thermal stresses. Principle stresses.

JCON20_MECH_411

Review on Waste Heat Recovery using Refrigeration System

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Abstract— The objective of this paper has to determine the energy savings associated with improved utilization of waste heat from a domestic refrigerator. Energy crisis all over the world compelled us to take necessary steps to reduce energy consumption. Heat is energy, so energy saving is one of the key matters from view point of use of refrigerants and for the protection of global environment. The heat rejected by condenser is of low quality, meaning temperature is low. Thus, practical uses of waste heat from the domestic refrigerators are typically limited to space heating and water heating. The system works on basic cooling cycle i.e. Vapour compression refrigeration cycle (VCRS). By saving energy we balance the demand & supply of electricity. All domestic refrigerators use air cooled finned condenser on backside. As domestic refrigerators reject large heat inside room which make us uncomfortable in summer due to temperature rise inside the room. So it is now essential to store this heat inside an insulated

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cabinet to utilize it for different purposes. Stored heat is used for keeping food hot, heating water which may be used for different purposes.

Keywords— Compressor, Refrigeration, VCRS cycle, Waste Heat Recovery, Water Chamber

JCON20_MECH_412

Design of Helical Conical Coil to Improve Effectiveness of Heat Exchanger

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Abstract - In helical coil heat exchanger on fluid flows through the coil and other fluid passes through the shell helical coil has better heat transfer rate as compared to shell and tube heat exchanger, Because of development of secondary flow. Helically coiled tubes are used frequently in heating, refrigerating and HVAC application and steam generator and condenser design in power plants because of their large surface area per unit volume. In this project we have design calculation of heat exchanger from that we have calculated the dimensions then we have manufactured design heat exchanger. Also we have done performance checking of heat exchanger. In that case we have been observed that our result are vary does to theoretical calculation.

Key Words: Helical Coil, Heat Transfer Coefficient, Conical Coil, Heat Exchanger.

JCON20_MECH_413

Fatigue testing machine

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Abstract - Engineering Components and mechanical machines are subjected to fluctuating stresses, due to this failure of the component occur below ultimate tensile strength.that type of failure is called fatigue failure. the machine used is fatigue testing machine. This work was undertaken considering very high cost of available fatigue testing machines to design this
fatigue testing machine. Some specimens are subjected to repeated fluctuating stresses and the no. of cycles are counted untill the breakage of specimen and result is plotted on gragh. Study of fatigue life was essential in many industry and specialized fields. Fatigue life of a component may be found by various types of fatigue testing machines based on the load. In todays study low–cost four point loading rotating bending fatigue testing machine was designed, fabricated and tested.

Key Words: Fatigue Testing Machine, Moore Test.

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JCON20_MECH_414

Fabrication and Analysis of Bladeless Wind Turbine (By principle of vortex oscillations)

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Abstract-Bladeless Wind Power Generation is new method to capturing wind energy. The device captures wind energy, an aerodynamic effect that has plagued structural engineers and architects for ages as the wind bypasses a fixed structure, its flow changes and generates a cyclical pattern of vortices. These forces are strong enough, the fixed structure starts oscillating. Instead of avoiding these aerodynamic instabilities our design maximizes the resulting oscillation and captures that energy. Naturally, design of such a device is completely different from a traditional turbine. Instead of the usual tower and blades, the device has a fixed mast, a power generator and a hollow, lightweight and semi rigid fiberglass cylinder on top. It also makes it highly competitive not only against generations of alternative or renewable energy, but even compared to conventional technologies.

Key words:-Turbine, Bladeless, Piezo Electric Material, Vortex.

JCON20_MECH_415

“Design and Fabrication of Effi-Cycle Chassis”

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Abstract- From the beginning of our civilization, automotive have been always all integral part of the society, bicycles or what we commonly called cycles is the primitive stage of all automobile. The term Effi-cycle stands for what we called all efficient cycle or hybrid cycle. It is the special kind of cycle moves with higher efficiency than the normal bicycle which has the maximum 60% efficiency & increase in magnitude is almost impossible. In relation to the recent surge of development within the automotive industry, and also the growing need for energy source for mobility in day to day scenario, this project carried aims to providing an energy efficient human powered Efficycle three wheel electric vehicles capable of carrying two passengers. All the features like drive train, differential, suspension, brakes, steering, and frame structure has been designed to comply with the requirements of the people.

Keywords- Effi-Cycle, Efficiency, Impact, Stress.

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JCON20_MECH_416

Modification of Power Operated Cultivator

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Abstract -Weed control is one of the most difficult tacks on an agricultural farm. Three method of weed control are commonly known in agricultural. These are mechanical, chemical and biological control. Due to chemical control method soil gets polluted and it is harmful to our body. Biological method is less effective than other method so these methods are not useful. Mechanical weed control not only uproots the weeds between the crops rose but also keeps the soil surfers loose, ensuring better soil aeration and water intake capacity weeding by power tiller reduce the cost of labor and also save time. Various type of mechanical weed has been developed. In human operated weed muscular power is required and so it cannot be operated for long time. The Traditional method of hand weeding is time consuming. In order to assess the possibility of mechanization of weeding operation, the power operated has to be produced the power produced by us is lesser in cost less time consumable easy to operate.
Key Words: Rotary, Tiller blades, Soil, mechanical, weeding, Cone pulley

JCON20_MECH_417

Modification of Shell and Tube Heat Exchanger

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Abstract - In present time and also for future the cost of energy is very high and there is presence of waste energy much greater. So we utilize it for useful work so that we think about the heat exchanger which is based on utilization of waste energy which we get from DG set or generator. The Diesel generating set which uses diesel engine is gaining popularity in rural areas because it produces electricity for irrigation as well as agricultural purposes. But there are some losses associated with diesel engine which tend to reduce its efficiency and performance. Out of which exhaust heat loss is the major loss which contribute almost 33-36% and leads to the waste of heat which could be recovered and considerable amount of primary fuel could be saved. In present paper attempt have been made for recovering of waste heat energy of exhaust gas of diesel engine by placing specially designed heat exchanger just close to the inlet and outlet duct of engine so that energy from the exhaust can be used for preheating the air passed towards the engine. A simple counter flow shell and tube heat exchanger was designed and fabricate depending on output obtained from initial design. Diesel engine with incorporation of heat exchanger shows improved performance of engine and also shown reduction in smoke level.
Keywords: Diesel Engine, Exhaust gas, Heat exchanger, Waste heat recovery

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JCON20_MECH_419

Design and Optimization of Treadmill Machine

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Abstract - A treadmill is device generally used for walking as well as running of the body fitness. Treadmills were introduced before development of powered machines, to use the power of humans to do work. Treadmills which developed in ancient time were large in size and these treadmills could not be capable of carrying purpose. To overcome this disadvantage, we are going to introduce our project on Smart treadmill machine. We first make this machine more compact also portable. Treadmill becomes compact by making three folds of base plate. We design frame of treadmill which having three parts, which is base plates of treadmill. In which one base plate is going to fold on other with the help of hinge connection and folding base plates of frame going to slide over other plate through provided channels by sliding mechanism. The design consists 2 HP DC motor, two rollers, locking brackets, side brackets, shaft, bearing and treadmill belt. Its size becomes small due folding, this treadmill becomes portable. We also reduce its weight using composite materials and the other materials which are capable of sustaining weight of human. Our main aim to do this project is, reducing size, make easily foldable to carry in other places where we require.

Keywords: Smart Treadmill, Foldable, Portable, Sliding Mechanism, DC motor, etc

JCON20_MECH_420

Design and Fabrication of Rocker Bogie Mechanism Powered by Solar Energy

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Abstract— Rocker bogie is important for conducting in-situ scientific analysis of objectives that are separated by many meters to tens of kilometers. Current mobility designs are complex, using many wheels or legs. They are open to mechanical failure caused by the harsh environment on Mars. A six wheeled rover capable of traversing rough terrain using an efficient high degree of mobility with capability to carry payloads and equipment's. The primary mechanical feature of the rocker bogie design is its drive train simplicity, which is accomplished by using six motors for mobility. Six wheels are used because there are few obstacles on natural terrain that require front wheels of the rover to climb simultaneously. The rover has been completely made from PVC to increase its capability to withstand shocks, vibrations and mechanical failures caused by the harsh environment where it is operated on. The aim of our project is to develop a rocker bogie mechanism at minimum cost and using solar energy for its operation.

Keywords: Rocker bogie, DC Motors, Solar Panel, PVC pipes, Battery.

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JCON20_MECH_421

Study of improving cooling effectiveness in injection moulding through optimization in gun drilling

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Abstract-The present manufacturing scenario demands low quantity and high variety parts. This can be achieved only through lean manufacturing. The present production system like Just-in-Time manufacturing demands smaller production quantities which in turn mean more setup times (non-productive time). Companies should focus on reducing non-productive time in order to remain competitive. Thus quick change over is a critical element in lean manufacturing. Quick changeover is also known as setup reduction which focuses on eliminating or reducing non value added activities during the setup. This helps companies to efficiently change the tool mould from one part to another. Deep-hole drilling is a relatively complex drilling production process due to the high-hole diameter to length ratio which makes the tool shaft prone to vibration and results typically in low-quality holes from geometry and surface finish viewpoints. This study is aimed at in vestigat-ing deep-hole drilling process for AISI D2 material taking into account different process input parameters.

Keywords: AISI D2, Gun Drilling,Deep Hole Drilling,Technique.

JCON20_MECH_422

Modification in Bernoullis experimental setup

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Abstract – Bernoilli’s apparatus is one of the simple but experimental devices of fluid echanics. With this setup anyone could be able to verify physically verify the Bernoulli’s equation which is the foundation of fluid mechanisc and base on fluid flow problem. It will help the undergraduate students to understand the basic concept of fluid friction, pressure head, velocity head and many other related terminology about the static and dynamic fluid flow. Designing characterizing and constructing such a device is surely a chalanging job which is definitely a result of combination of merits and hard work. In most of the cases this device are imported from outside the country for experimental purpose and basic lab work. But by using our engineering knowledge and true effort we can construct such device rather than importing them. On the other hand by onstructing such complex structure, students will be able to oriented with many important aspect about construction of engineering apparatus. Subsequant further modification and improvement of this project is always welcome.

Keywords: Bernoulli’s equation, Principle and application.

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JCON20_MECH_423

Design and Development of Model on Air Braking System using Engine Exhaust Gases

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Abstract- The aim of this project is to develop an air braking system based on exhaust gases to reduce the workloads of engine drive to operate air compressor, because here the compressor is not operated by engine drive. Here we are placing a turbine in the path of exhaust from engine. The turbine is connected to Dynamo. Depending upon air flow the turbine is start rotating, and then Dynamo will also start to rotate. Dynamo converts the kinetic energy into electrical energy. The generated power can be stored in battery and then this electric power has loaded to DC compressor the air compressor compresses the atmospheric air and it is stored in Air tank. The air tank supplies the compressed pneumatic power to pneumatic actuator to apply brake.
Keywords- Dynamo, Turbine, DC compressor Pneumatic Actuator.

JCON20_MECH_424

A Review on Re-generative Suspension System for Four Wheeler

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Abstract - The conventional vehicle suspension dissipates the mechanical vibration energy in the form of heat which waste considerable energy. The regenerative suspensions have attracted much attention in recent years for the improvement of vibration attenuating performance as well as the reduction of energy dissipation. Above all, the amount of energy dissipation and the potential of energy regeneration are discussed, then the research and development of regenerative suspension is reviewed, and the energy harvesting schemes and their characteristics are summarized and remarked. In conclusion, only combining vibration reducing performance and energy harvesting efficiency can the regenerative suspensions have a promising prospect.
Key Words –Electromagnetic regenerative suspension, shock absorber, green manufacturer.

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JCON20_MECH_425

Implementation of reverse gear in go-kart

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Abstract - Generally we observe that kart is manually moved with the help of the push pull rod in forward or reverse direction, but by implementing reverse gear mechanism we can minimize the efforts required to move kart in reverse direction. Gearbox is an enclose system of assembled gears that transmits mechanical energy from a prime mover to the output device. A gearbox can also change the speed, direction, and torque of mechanical energy. Gearbox is a device placed between clutch and propeller shaft. It allows the engine to run at different speeds relative to road vehicles, as to maintain its power and regulate the torque. The vehicle requires high torque when climbing hills and when starting, even though they are performed at low speed
Key Words: Dog clutch, Go-Kart, Reverse gear, Spline shaft.

JCON20_MECH_426

Review on Measurement and Development of Vibration Sensors

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Abstract-Traditional vibration measurement methods involve placing accelerometers at discrete locations on a test object. In cases where the test specimen is small in mass, the addition of these measurement transducers can alter its dynamic behavior and lead to erroneous test data. In this review a Non-Contact Vibration Measurement and Analysis System has been designed, built, and tested. Through a product design process, all feasible methods were considered and three optically based concepts were explored: holographic interferometry, area scaling, and displacement sensor grid. Through concept testing and analysis, the displacement sensor grid method was chosen for the design. The final system incorporates four laser displacement sensors with a vertical scrolling mechanism that attaches to the vibration table's side rails. This manual scanning system provides a quick, low cost method for capturing multiple points on the test object during vibration testing. The MATLAB based software package acquires the raw sensor output and processes it with a five step analysis program. Electronic board displacements were easily transformed into a movie showing the board displacing through its first mode. When compared with previous accelerometer grid testing. Exceeding its design goals, this non-contact measurement and analysis device provides a highly versatile, accurate, and low cost optical alternative to accelerometers. Also it shows numerous benefits over more complex and costly optical measurement methods.
Keywords: Development trend, Present situation order, Sensor, Vibration measurement.

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JCON20_MECH_427

Waste water for power generation system

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Abstract-The basic aim of our project is to use wastewater as catalysts for generating electricity while simultaneously treating wastewater for agricultural of plants of college campus. Renewable energy will one day be a large portion of global energy production and usages. The micro turbine is an example of Micro Electro Mechanical Systems, which is efficiently used to develop power at a small scale. In today's energy economy, most electricity is produced using fossil fuel-burning generators. Waste water is water that has adverse effects on environments. The sewage from campus has been identified which tends to water pollution. Using this waste water we will generate electricity up to 15 Watts power.

Keywords: - waste water, micro-hydro turbine, power generation.

JCON20_MECH_428

Mechanical and Tribological Investigation of Coated AISI4140 Steel

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Abstract—In present investigation TiAlN, TiCN, CrN multilayered coatings thin films have been developed. They consist of superposing Cr, CrN, TiC, TiAl layers. These coatings were grown on AISI 4140 steel samples. The mechanical and tribological properties of these coating is to be characterized by Adhesion Test, Scratch Test, X-Ray Diffraction Test (XRD), and Scanning Electron Microscope (SEM). Characterisitics of arc PVD- CrN coatings formed on plasma nitrided and as-received surfaces of hardened AISI 4140 steel before and after nitiriding have been examined by adhesion and wear tests. CrN coating deposited on the nitrided surface exhibited remarkable advanced properties as compared to the CrN coating deposited on the as-received surface

Keywords: Scanning Electron Microscope; Gas nitriding; Wear Test; Plasma Nitriding

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JCON20_MECH_429

Review paper on low head hydro turbine for power generation

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Abstract-Despite that researchers and equipment manufacturers have paid less attention to the emerging field of open type low-head power turbines, open type low head turbines can provide innovative, environmental friendly and cost-effective solutions for energy production. Such turbine can has power generation capacity in the range 0.1kw to 0.5kw, the challenge is to provide new turbine designs, which can be customized and applied to existing water systems, characterized by low-head and nearly constant flow rates. Power generation capacity of Open type low head turbine is similar to the Micro hydro turbine. Such low head turbine schemes have good prospects for potential use in remote location. The geometry and configuration of the proposed turbine is suitable up to a head of 0.25m to 1 m and flow rate about 10-16 lit/sec. [1]
Key Words— Power Generation, Turbine

JCON20_MECH_430

Design of stationary engine on fillet basis by optimizing IC engine valve

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Abstract: An auto rickshaw is a three wheeled motor vehicle with one front steering wheel. Auto rickshaws are most commonly found in developing countries as they are a very cheap form of transportation due to low price, low maintenance cost, and low operation costs. Trailing arm mechanical system that is usually used because the rear suspension in three wheeler car rickshaws offers a straight forward configuration. Trailing arm is important component of suspension system as the suspensions control the movement of the wheels and thus keeping the vehicle on the road. Finite Element Analysis (FEA) is the most powerful technique for strength calculations of the structures working under known load and boundary conditions. FEA approach is applied for the optimization. 3D model of a trailing arm is drawn in CATIA V5R20, and ANSYS is be used for numerical solutions. Finally ANSYS results are validated through experimental results. Overall 8% weight reduction is achieved keeping system safe.
Keywords: Intake Valve, Stress concentration, Optimization.

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JCON20_MECH_431

Motorised Cold Press Oil Expeller

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Abstract- This project work represents the design and construction of an oil expeller press, performance test of it with several raw materials e.g. coconut, rape seed, sesame, sunflower seed and structural analysis of the screw. There are several processes to extract oil from these e.g. chemical, centrifuge and mechanical. A mechanical oil expeller press was designed, constructed & further analyzed with simulation software (ANSYS) in this research work. This expeller can be useful for small scale oil extraction. ASME shaft design code was used in designing the screw shaft of the press. Locally available material (mild steel) was used in manufacturing of the expeller. A 20 hp 3-phase electric motor was used for running the machine and the rpm of the screw was maintained 140rpm.
Keywords: - Oil Expeller, Gear Box , Belt And Pulley, Oil Extraction .

JCON20_MECH_432

Design of Scrubbing System for Chemical Plant

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Abstract-The environmental pollution by industries, vehicles, and chemicals from consumer products contributes to air pollution which is a complicated problem with many causes and effects and few solutions. The “Wet Scrubber” is one of the most commonly used as pollution control devices by industry or transportation devices. This device removes pollutants from a furnace flue gas or from other gas streams. In this device the polluted gas stream is brought into contact with the scrubbing liquid. Scrubbing liquid is sprayed on to the flue gas to remove the pollutants. This is generally the only single air pollution control device that can remove both particle matter and gases pollutants. Polluted gases are soluble in the liquid and the large particles are captured by the use of a scrubbing reagent such as lime or water.
Keywords- Wet Scrubber, scrubbing liquid, scrubbing reagent, etc

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JCON20_MECH_433

Design and Fabrication of Reaper Machine for Wheat and Rice Crop

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Abstract - The ultimate aim of agriculture or farming in India is not only limited to growing of crops but is also associated with the economic growth of farmers and labours. Small scale farmers frequently face the problem of labour shortage or are unable to afford the wages to be paid. It is therefore, essential to adopt the mechanical methods so that the timeliness in arresting operation could be ensured .considering different factors as power requirement, cost of equipment, ease of operation, field condition, time of operation and climatologically conditions. It runs on two stroke petrol engine of 3HP, this power from engine, is provided through pulley and gear box arrangement to the cutter. This compact harvester is manufactured using locally available spare parts and thus, it is easily maintainable. This harvester might be the solution to the problems faced by a small scale farmer regarding cost and labour implementation.
Keywords - Agriculture, Reaper, Cutting Blade

JCON20_MECH_434

Automated Gear Shifting in Two Wheeler

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Abstract:-The main objective of this project is used to bring automation in gear shifter of two wheelers using pneumatic cylinder. This is the new innovative model mainly used for the vehicles to control the vehicle. Here we are concentrating to design the automatic gear changing mechanism in two wheeler vehicles by using the components like gear box, pneumatic cylinder, DCV, battery, electronic switch etc. This is very useful and unique method for the gear changing mechanism in two wheeler vehicles. By using this we can easily control the bike through electronic system which will give instruction to pneumatic cylinder through programming we going to achieve to control motion i.e. forward or Reverse
Keywords- gear box, battery.

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JCON20_AUTO_435

Experimentation on I.C. Engine by Using Secondary Fuel (HHO)

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Abstract— the rapid depletion of fossil fuels and rising of oil prices has led to the search for Secondary fuels. The Secondary fuels that we are using should have the same efficiency or greater efficiency of the engine that uses ordinary fuel. In this project this secondary fuel used is HHO gas. HHO otherwise known as hydroxyl or Browns Gas is the gas produced from splitting water into hydrogen and oxygen from electrolysis and allowing the gas to stay in a premixed state for use on- demand without the need for storage. This reduces the exhaust gas emitted during the working of engine, and the temperature of the engine is also reduced which is produced by the burning of ordinary fuels. The HHO gas is injected into the inlet manifold of the combustion chamber through the air filter of the engine. From this design the fuel utility is reduced from 10% to 30% which minimizes the carbon deposition in the cylinder there by increasing the changing period of engine oil, it also improves the efficiency of the engine and the life span. Engine to rqueal so increased and pollution gets reduced to maintaining the greenhouse effect.

Keywords: Engine, secondary fuel, Browns gas, Exhaust, Exhaust gas, Temperature, Electrolysis, Pollution.

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GENERAL SCIENCE

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JCON20_GS_501

Review paper on the use of computer in Mathematics

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Abstract— The quality of arithmetic instruction of a nation sets the course of its future. Checking the pattern in arithmetic instruction and the elements of science proficiency is the prime obligation of educationists and mathematicians. hand-tackled issues are comprehended again by a CAS programming mathematica. The preferences and inconveniences of showing science through mathematica are noted. This additionally depicts a portion of the ongoing endeavors

Keywords— CAS, advantages, calculations.

JCON20_GS_502

Synthesis of PANI based modified sensor with silver nanoparticles for detection of urea.

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Abstract A novel polyaniline (PANI) based amperometric urea biosensor has been developed for selective and quantitative determination of urea by immobilizing urease onto nanocomposite graphite paste electrode modified with silver (Ag) nano particle (PANI/Gr/AgNO3) and without silver nano particle(PANI/Gr) and monitoring the amperometric response caused by the immobilized urease reaction system. Urease immobilization on electrode was investigated using a amperometric method, and factors affecting its immobilization such as concentration of urease, pH was discussed in detail. Organized materials were characterized by analytical techniques such as UV-Vis and FE-SEM analysis. The performance of the developed urea biosensor was evaluated and obtained urea biosensor exhibited shorter response time (3s), wider linear range, lower detection limit and good stability with about 90% of the original response signal retained after 2 month for silver nano particle.

Keywords: Amperometric; biosensor; immobilization.

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JCON20_GS_503

AN ADAVNCEDIOT-BASED FOOD QUALITY MONITORING APPROACH USING LOW COST SENSORS

Shinde Jayshri Gulab, Suruse Shraddha Maruti,
Chavhan Rajashri Mahipat, Said Shubhangi K

Abstract- Over the past decades, the evolution of multi-purpose sen- sors has been investigated with the aim of developing in- novative devices with applications in several technology fields, including the food industry. Integrating such sensors into food storage technology has paved the way for smart food storage. Throughout their processing time, these in- tegrated systems are able to provide reliable information about the performance of the packed goods.Smart packs use a number of sensors to track the quality and safety of food products by monitoring the evolution of param- eters such as the quantity of pathogenic agents, chemi- cals, temperature, humidity, and processing time to achieve this goal. Combined with IoT, this system can provide much more data than conventional food inspection systems that are limited to inspection of weight, size, color and di- mension. The original program mentioned in this work was based on a simple but effective method of automated food tracking at the customer's home, suitable for vacuum-packed foods cooked by the consumer. This draws on the idea of IoT and can create an integrated computer network. By using this approach, in sharing information across net- works, we are able to combine actuators and sensing in-struments that also provide a specific operating picture (COP). More specifically, our system consists of sensors for fuel, temperature and humidity, supplying the essential infor- mation required to determine the packaged product's per-formance. Such information is transmitted wirelessly to a computer system that provides an interface that allows the user to track the product quality progression over time.

Keywords: Arduino,DHT 11 Sensor,M Q 3Sensor,Fire Sensor,LDR Sensor,Thing Speak Server etc.

JCON20_GS_504

DETECTION OF MELANOMA USING IMAGE PROCESSING TECHNIQUES

Gadg Kiran, Javheri Renuka, Sable Paurnima, Khatri Anand A.

Abstract - The most dangerous type of human skin cancer is malig- nant melanoma, and its incidence has increased rapidly. Early detection of malignant melanoma in dermoscopic images is very important and critical as it can be helpful to cure it in the early stage. Computer Aided Diagnosis programs can be very helpful in helping dermatologists to identify cancers early. System uses a new approach to di-agnose melanoma skin cancer in this proposed system. To detect hair and several noise from pictures, pre-processing stage is done by adding a bank of directional filters and thus Image processing method is applied to fill the un- known regions. Program has checked the precision, acces- sibility, specificity of the publicly available PH2 dataset. It is found that good results are produced using the principle of repetition on applications to eliminate the same function or picture during the training and testing process, thereby confirming the validity of the method suggested.

Keywords : melanoma, image processing, svm data

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JCON20_GS_505

IMPLEMENTATION OF HOUSE PRICE PREDICTION MODEL USING IMAGE PROCESSING MACHINE LEARNING

Gaikwad Purva, Ganjave Pratiksha, Gorade Pooja, Mrs. Jadhav S.B.

Abstract - The pricing of house not only depends on the size of the property and no. of rooms, but also on the neighborhoods like transport facility, banks, schools or colleges, shops etc. When a person buys a home, they considers structural fea- tures, working accessibility, neighborhood services. While purchasing the house, the price of house is the main factor which is considered by people. Hence, a house price pre- diction system is invented to improve estimation of house prices. This system presents a House Price Prediction us- ing Image Processing and Machine Learning. The system gives comparison of prices of house at particular location for customers. It also gives comparative pricing rates to builder so that he can estimates his construction budget to compete with other builders at that area. The satellite images have been used to visualize impression of neigh- borhood. The Image Processing is applied to satellite im- ages and Machine Learning algorithm Convolutional Neu- ral Network(CNN) and Linear Regression is used for esti- mation of house pricing. The project is purpose to predict price of houses at particular area to people and builders.

Keywords:component: Convolutional Neural Network, Feature Extraction, House price prediction, Image Pro- cessing, Linear Regression, Machine Learning, Prepro- cessing.

JCON20_GS_506

LOCATION BASED NOTIFICATION SYSTEM FOR BUS TRACKING PARKING FOR ANDROID DEVICES

Chavan Prajakta Nitin, Gholap Yogita Laxman,

Arote Tejal Tanhaji, Mrs. Jadhav S.B.

Abstract - An android application is developed for friendly sugges- tion and notification. If a friend is about 1 kilometer away, the user is notified on a mobile phone. The mobile de- vice triggers an alert when the user sets location on a map and a user reaches the specified zone. Register Shops Of- fer Alert-when you reach some zone, the client can report deals to such shops if this field shops are entered in the reg- istry. A client position (using GPS or LBS) is constantly being sent to a mobile. The Admin Panel includes an orga- nizational account for shop which adds and removes offers for shop. Shop managers may attach deals to a panel using the credentials. Bus monitoring and parking are planned by the system. Services based on location (LBS) provide tailored services for mobile users, based on their current position. In addition, system open up a new field for de- velopers, network operators and service providers. Live Monitoring helps determine the current location of the bus or parking zone, thus improving the efficiency and protec- tion of most commercial vehicle fleets.

Keywords:component: parking system, online shopping, LBS, GPS

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JCON20_GS_507

The Future Of Judiciary And Lawin Legal Cases Using Machine Learning

Maherin Patel, Shruti Dere, Payal Hande, Mr. C.S.

Abstract - Now-a-days , number of crimes occurs in the society and this criminal rate increase every day. There is tremendous growth in crimes. Crime has negatively impacted the so- cieties. Crime control is essential for the development of society. Various Law agencies are seeking for the system to understand where, when and why crimes can occur. There is a need for the advance technology in the data storage col- lection, analysis and using the machine learning algorithm that can handle data and predict the things which gives the result. In the proposed system we are using Machine learn- ing algorithms to predict the punishment and Judgement according to the criminal's crime.

Keywords:Machine Learning, Prediction, Law Enforcement, Crimes, Text Classification, Case Law.

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