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ICASETM– 2018

2nd International Conference on Applied Sciences, Engineering, Technology and Management

Pune, Maharashtra
20th – 21st April 2018

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Organized By:

Rajgad Dnyanpeeths Technical Campus,
Shri Chhtrapati Shivajiraje College of Engineering
Dhangwadi, Pune, Maharashtra

From Director's Desk ….

Rudra Bhanu Satpathy.,
Director,
Institute For Engineering Research and Publication.

On behalf of ***Institute For Engineering Research and Publications (IFERP)*** and in association with ***2nd International Conference on Applied Sciences, Engineering, Technology and Management,*** Pune, Maharashtra. I am delighted to welcome all the delegates and participants around the globe to ***Rajgad Dnyanpeeths Technical Campus, Shri Chhtrapati Shivajiraje College of Engineering Dhangwadi, Pune, Maharashtra*** for the ***"2nd International Conference on Applied Sciences, Engineering, Technology and Management (ICASETM -2018)"*** Which will take place from ***20th -21st April '18***

Transforming the importance of Engineering, the theme of this conference is ***"2nd International Conference on Applied Sciences, Engineering, Technology and Management (ICASETM -2018)"***

It will be a great pleasure to join with Engineers, Research Scholars, academicians and students all around the globe. You are invited to be stimulated and enriched by the latest in engineering research and development while delving into presentations surrounding transformative advances provided by a variety of disciplines.

I congratulate the reviewing committee, coordinator **(IFERP & RDTC)** and all the people involved for their efforts in organizing the event and successfully conducting the International Conference and wish all the delegates and participants a very pleasant stay at ***Pune, Maharashtra.***

Sincerely,

Rudra Bhanu Satpathy

Preface

The ***2nd International Conference on Applied Sciences, Engineering, Technology and Management (ICASETM -2018)*** is being organized by ***Rajgad Dnyanpeeths Technical Campus, Shri Chhtrapati Shivajiraje College of Engineering*** in association with ***Institute For Engineering Research And Publication (IFERP).***

Rajgad Dnyanpeeths Technical Campus, Shri Chhtrapati Shivajiraje College of Engineering is a premier Institute established in the year 2004 under the patronage of PU educational society.

It is gratifying to know that ***ICASETM -2018*** was a notable event which brings academicians, researchers, engineers, industry experts and students together.

Covering broad range of topics in various domains the conference will be a perfect platform to share experience and foster collaborations across industry and academia to evaluate current and emerging trends across the globe.

The International Conference attracted over 92 submissions. Through rigorous peer reviews 67 high quality papers were recommended by the Committee. The Conference applied focus on the tools and techniques for the developments on current technology.

We are indebted to the efforts of all the reviewers who undoubtedly have raised the quality of the proceedings. We are earnestly thankful to all the authors who have contributed their research works to the conference. We thank our Management for their wholehearted support and encouragement. We thank our Principal for his continuous guidance. We thank all the members of our local organizing Committee, National and International Advisory Committees.

ICASETM - 2018

Hon. Anantraoji Thopte
Ex- Education Minister (Maharashtra State),
Founder President, Rajgad Dnyanpeeth,
Bhor, Pune

President's Message

It is a great pleasure for me to congratulate all the participants in the **2nd International Conference on Applied Sciences, Engineering, Technology and Management (ICASETM -18)** in association with the **Institute For Engineering Research and Publication (IFERP)** at RDTC Shri Chhtrapati Shivajiraje College of Engineering, Dhangwadi, Pune and to welcome the participants who have to exchange experience.

Applied Sciences, Engineering, Technology and Management plays vital role in the modern life, profoundly influencing the course of human civilization. All the great scientific discoveries and Information technological achievements in our country have improved the Indian economic status and have created many new ways to the new generations to grow in the technologically advanced environment.

The main goal of the conference is to educate and motivate the participants to develop skill dynamics which must be the high priority of Indian technical education for the Applied Sciences, Engineering, Technology and Management development in our country in extraordinary manner. We will Endeavour to provide the best through lectures, paper presentation and students activities which will be a part of this conference. Speakers and prominent figures in various technical fields have been invited for sharing their latest insights of academic and research in Applied Sciences, Engineering, Technology and Management.

(**Anantraoji Thopte**)

Hon. Sangram Thopte., MLA
Executive Chairman,
Rajgad Dnyanpeeth,
Bhor, Pune

Chairman 's Message

It gives me immense pleasure to know that the RDTC Shri Chhtrapati Shivajiraje College of Engineering has taken up the great challenge of organizing an **2nd International Conference on Applied Sciences, Engineering, Technology and Management (ICASETM -18)** in association with **Institute for Engineering Research and Publication (IFERP)**. I congratulate the department for their maiden attempt for holding the conference and I am happy with the revered publication of articles.

The facets of Applied Sciences, Engineering, Technology and Management are changing very fast. Hence Science and Technology has to be infused with new variety to play a decisive and beneficial role in advancing the well-being of all sections of our society. The **ICASETM -18** will play a humble role in bring together researchers, young scientists and students in an informal environment for discussing the latest advances in the field of Computer Science and Communication Technology.

Visit of various researches under the roof of RDTC Shri Chhtrapati Shivajiraje College of Engineering is a matter of pride and immense pleasure to all of us. I hope that this volume which has been brought out by **ICASETM -18** will be of great academic value for common scholars and common readers. I convey my blessings and good wishes to all members of the **ICASETM -18** family, for their dedicated involvement in this great event.

Since its inception RDTC Shri Chhtrapati Shivajiraje College of Engineering is moving towards the heights of education and serving the society with quality education.

(**Sangram Thopte**)

Hon.Sou.Dr.Bhagyashri Patil
Secretary,
Rajgad Dnyanpeeth,
Bhor, Pune

Secretary's Message

It is great pleasure for me to congratulate all the participants in the First **2nd International Conference on Applied Sciences, Engineering, Technology and Management (ICASETM -18)** jointly organzied by **Institute For Engineering Research and Publications (IFERP)** and **RDTC Shri Chhtrapati Shivajiraje College of Engineering** and welcome the participants who have to come to here to exchange experience.

The topics covered by the Conference plays vital role in the modern life, profoundly influencing the course of human civilization. All the great scientific discoveries and information technological achievements in our country have improved the Indian economic status and have created many new ways to the new generations to grow in the technologically advanced environment.

The main goal of the conference is to educate and motivate the participants to develop skill dynamics which must be the high priority of Indian Higher education for the development of various technologies in our country in extraordinary manner. We will endeavour to provide the best through lectures paper presentations and students activities which will be a part of this conference. International speakers and prominent figures in various technical fields have been invited for sharing their latest insights of academic and research in various disciplines.

I feel very much delighted to inform you that International Conference on Applied Sciences, Engineering, Technology and Management (ICASETM -18) will provide innovative outcome to face the emerging challenges in different disciplines. I congratulate all the staff members of the conference who enthusiastically took these efforts. I whole heartedly appreciate the sincere efforts of the entire team of this great event. I wish them all a grand success!

(**Dr. Bhagyashri Patil**)

Dr.S.B.Pati
Principal,
SCSCOE, Pune

Principal Message

Greetings from RDTC Shri Chhtrapati Shivajiraje College of Engineering, Dhangwadi, Pune

On behalf of the management and staff, I would like to invite all of you to the International Conference.

I am glad to inform you that the **2nd International Conference on Applied Sciences, Engineering, Technology and Management (ICASETM -18)** at RDTC Shri Chhtrapati Shivajiraje College of Engineering in association with the institute for Engineering Research and Publication (IFERP).

The International Conference (ICASETM -18) aims to focus on applications and will be of interest to students, academicians, industrialists and others. The conference has an array of sessions dedicated to various application themes and several invited talks by experts from India and abroad. The papers contributed will be comprehensively administered to appear in IFERP journal.

I wish all the best to the participants and the organizing committee of the said conference, who have put lots of efforts for successful organization of this International Conference.

I wish you all the best.

(**Dr.S.B.Pati**)

Prof. M. B. Wagh
HOD, Computer Engineering,
SCSCOE, Pune

Convener Message

It gives me immense pleasure to pen that RDTC Shri Chhtrapati Shivajiraje College of Engineering is organizing an **2nd International Conference on Applied Sciences, Engineering, Technology and Management (ICASETM -18)** in association with the Institute for engineering research and publication (IFERP) on 20th and 21st April 2018. The applications of any advances science and engineering is to facilitate the nation for its development.

The conference is aimed to serve as a premier venue for the dissemination of leading edge research in **Applied Sciences, Engineering, Technology and Management.**

I hope that this conference would certainly light up innovative ideas by paving way to new inventions and integrate new technologies in the Applied Sciences, Engineering, Technology and Management sector and the deliberations in the conference will help researchers from academia, industry and the conference will provide a platform for initiating collaborative research projects.

All the best.

(**Prof. M. B. Wagh**)

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Pune, Maharashtra, 20th-21st April 2018

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- ***Dr. Santosh Bhosale,*** Principal, MIT, Aurangabad
- ***Dr. J. A. Hole, Professor,*** RSCOE, Pune

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ABSTRACTS

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Modular Machine Technology in Manufacturing Industries: A Review

Anil Kumar Mahawar., Research Scholar, Department of Mechanical Engineering, YMCA University of Science &Technology, Faridabad, Haryana

Dr.Vasdev Malhotra., Associate Professor, Department of Mechanical Engineering, YMCA University of Science &Technology, Faridabad, Haryana

Abstract:--

The idea of modularity has gained acceptance due to mass customization and the need for shorter development time in manufacturing. Modularity is a general concept, and many engineering problems can be generalized under the umbrella of modularity. Numerous studies have been carried out on modularity-relevant issues; however, systematic classification has not been discussed for modularity in terms of its applications and methodologies for developing modularity in systems. This review paper is based on modularity applications, issues in modular design, and design methodologies. It provides a general framework for further systematic development of modularity in systems.

Keywords:--

Design methodology; Modular design; Modularity; Modularity application;

Weblog Analysis and Identifying Bot Traffic Using Big Data

Jinu Shibu., Department of Information Technology, SRM Institute of Science and Technology
N Arivazhagan., Department of Information Technology, SRM Institute of Science and Technology
Vineeth Thomas., Department of Information Technology, SRM Institute of Science and Technology
Arjun R., Department of Information Technology, SRM Institute of Science and Technology

Abstract:--

Spiders are small web programs that harvest information for search engines. These spiders track the websites. In some ways, these are good by quickly showing up the websites. These programs follow certain links on the web and gather information. Like the good spiders, bad spiders also exist and are known as spam spiders. Bad spiders attempt to harvest one's email address. Some spiders may not work efficiently and run in endless loops which are built by dynamically created web pages. So in this project, we try to identify the bad spam spiders present in the webpages and try to eradicate them. And also we minimize the bot traffic. This idea was firstly proposed by Google namely Google Analytics. Proposed methodology used in preprocessing of the huge volume of web log files and finding the statics of website and learning the user behavior.

Performance and Emission Characteristics of Multi Cylinder Petrol Engine using LPG with Methanol

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Abstract:--

The most promising alternative fuel will have the greatest impact on future society. The rapid growth of environmental pollution, energy security and future fuel supply, the non petroleum based alternative fuels are used to increase the efficiency of the fuel and impact on green house gases. LPG is a mixture of petroleum and natural gases that exist in a liquid state at ambient temperatures under moderate pressure (less than 200 psi). LPG has a high Octane rating, which indicates that the engine operated by LPG would be more efficient than that of equivalent petrol engine. LPG has been used as an alternative fuel in the existing S.I. engine with slight modification in the fuel supply system. The vaporizer is required to convert the liquid fuel into vapour supplied to the carburettor. The working of the experimental setup is four cylinders, four stroke petrol engine with the solenoid actuator. The actuator allows LPG to the carburetor through the vaporizer kit. LPG is metered by hanging type weighing scale. Methanol is added with LPG by volume under gravity before vaporizer kit. Engine hot water heats up the vaporizer kit for raise in temperature of LPG and to evaporate the methanol easily. The petrol engine is started with LPG and then it is run by a mixture of LPG and methanol by adjusting the LPG flow. The performance and emission characteristics of engine are investigated by varying the quantity of methanol and LPG. The thermal and mechanical efficiencies are increased with addition of methanol and the specific fuel consumption is decreased. The emission characteristics like CO, CO2, HC and NOx are also reduced.

Keywords:-

LPG, methanol, vaporizer kit, S.I. Engine, performance, emission.

Skeleton Tracking Using Microsoft Kinect for Windows on MATLAB

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Meet Bhatt., Student, School of Engineering and Technology, Navrachana University, Vadodara, Gujarat, India
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Rohit Negi., Assistant Professor, School of engineering and Technology, Navrachana University, Vadodara, Gujarat, India

Abstract:--
Kinect V2 for Windows uses time of flight and structured light pattern to acquire 3D word data which can be utilized by digital image processing for various application such as Human body skeleton tracking. Kinect for Windows is a low cost and accurate device to acquire such 3D data. In this paper, the brief review of Kinect sensor and image acquisition process for skeleton tracking is discussed. Acquired data is processed on MATLAB; Hence XYZ coordinates are extracted from the real-time 3D world. In the end, future of Kinect for evolving NUI in various fields are discussed

Index Terms:—
Image acquisition toolbox, KinectV2, MATLAB, Skeleton tracking

Numerical Analysis of Impact of Altering Leading Edge of Cascade Fins in Supersonic Flight

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Ganapati Joshi., Assistant Professor, Department of Aerospace Engineering, DIAT (DU), Ministry of Defence, Pune, India

Abstract:--
A cascade is a control surface which is composed of an external frame supporting an internal cascade of planar surfaces having small chord length. Variation of of leading edge shape of cascade fin has been considered in this paper to evaluate its effect in reducing the wave drag of a supersonic flying object. This paper deals with the effects of leading edge of cascade fin in isolation, in order to study and understand its impact in detail. Also the impact of modification of leading edge to varied shapes has been studied. The study on wave drag reduction by varying the leading edges of cascade fins, in supersonic flow regime, has been carried out by adopting computational fluid dynamics simulation, performed for a Mach number of 2 and angle of attack of 0 degree. The study of varied leading edges considered have displayed significant variation of wave drag, but in practical application, a particular leading edge needs to be chosen as part of the larger scheme of aerodynamic designing process

Key words:--
Cascade fin, Leading edge, Supersonic, Wave drag.

Batch Normalization and Its Optimization Techniques: Review

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Ashlesha Vaidya., Department of Computer Science Engineering.

Abstract:--

Batch normalization is a boon to the training of a deep neural network. It acts as a panacea to the problem of internal covariate shift and facilitates the usage of higher learning rates. It also accounts for the inclusion of saturating non-linear functions, while excluding the need of drop outs for regularisation. However, mini-batch normalization is not self-sufficient and comes with a few limitations such as inability to deal with non-i.i.d inputs and decreased efficiency with a batch size of one. In this paper, we explore normalization, the need for its optimization, and evaluate the optimization technique provided by researchers.

Index Terms:—

.i.d input, non-linear, normalization, internal covariate shift.

A Secure Text or Image Transmission Using Digital Watermarking

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Abstract:--

Now days, internet resulted in a considerable growth in multimedia applications. The considerable advancement of internet has made that easier to send the data/image with more accuracy and faster at the target place. Besides this, it is easier to change and misuse the original information through hacking at the same time. Digital watermarking is one of the best proposed solutions for avoid misuse or copyright protection of multimedia data. A watermark is a technique, image or text is impressed onto another Image, which provides evidence of its authenticity. Here an invisible watermarking technique (least significant bit) and a visible watermarking technique is implemented. This paper presents the general overview of image and text watermarking and different security issues such as ambiguity attack, cryptographic attacks etc. Various attacks such as ambiguity attack, cryptographic attacks. are also performed on watermarked images and their impact on quality of images is supplementary of paper. In paper, Image watermarking using Least Significant Bit (LSB) algorithm has been used for embedding the message/ into the image. This work has been implemented through MATLAB.

Index Terms:—

Watermarking, Least Significant Bit (LSB), JPEG (Joint Photographic Experts Group). MATLAB, MSB

A Comprehensive Review on Natural Fiber Reinforced Polymer Composites

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Vasudev Malhotra., Associate Professor- YMCAUST Faridabad
Sanjeev Goyal., Associate Professor- YMCAUST Faridabad
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Abstract:--

This century plays the dominant role in the development of high-performance material made from natural resources in all over the world. The large variations in characteristics and properties are the supreme challenges in the development of natural fiber polymer composites. The number of variables such as fiber-type, matrix materials and applications are prejudiced natural fibers reinforced with polymer composite properties. Finally, the new development of natural fiber reinforced polymer composites will be studied and concluded.

Key words:--

Natural fiber, Matrix material, Performances, Applications

Recyclable Perlite Concrete using Olivine Sand

R.B.Narendran.,
U.Rajkumar.,

Abstract:--

To make the perlite concrete strong enough to be used as wall panels by partial replacement of perlite aggregates by olivine sand. Compressive strength was determined for different ratios of concrete and finally a ratio was taken, in which 1.5 parts of natural perlite aggregates was replaced with olivine sand. Tests were performed on the olivine-perlite concrete cubes of standard size and it was seen that the compressive strength value obtained from the specimen was much higher compared to conventional wall panel materials. All the materials added are eco-friendly, also the emission of Co2 gas is reduced and hence does not cause much damage to the environment. Based on the results from the above tests, these blocks can be recycled and re-used for non load bearing walls. The model cube casted can be scaled up in dimension to meet the requirements of a commercial blocks and can be used for construction of wall panels in framed structures.

Key words:--

Perlite concrete, Recyclable concrete, Olivine sand

Synthesis of Stable ZnO Quantum Dots by a Simple Hydrolysis and Condensation Method

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Abstract:--
Herein, we report the preparation of ZnO quantum dots by hydrolysis and condensation method. These quantum dots are characterized by optical absorption, photoluminescence, and transmission electron microscopy, that suggest that the present method of synthesis gives stable, extremely small size particles with narrow size distribution and exhibit strong blue emission. The present method of synthesis of ZnO nanoparticles can used to fabricate low cost electronic devices for different applications.

Key words:--
ZnO nanoparticles, optical absorption, fluorescent, TEM, particle size.

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A Contrasting Survey on Resource Scheduling Algorithm in Cloud Computing

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Abstract:--

Cloud computing provides various dynamic services in distributed environment over internet. It delivers software, information, shared resources using virtualized and scalable resources over a network rather than a product. Cloud is developing day by day and faces many challenges, one of them is scheduling. Scheduling refers to a set of policies to control the order of work to be performed by a computer system. Many well known task schedulers cannot be applied in this large scale distributed environment due to high costs of communication. In cloud computing the most important factor is scheduling the resources. Time, conditions of the request for access to services, quality of service are issues in today's cloud computing. This paper presents analysis of different scheduling algorithms in cloud platform on following different conditions such as Time, conditions of the request for access to services, quality of service.

Index Terms:—

ABC, AWT, FCFS, SJF

Encountering Evidence of a Node with Poximity based Mobile Opportunistic Social Network

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Abstract:--
The mobile communication are usually done by proximity based mobile opportunistic social network to communicate between the nodes. Usually the nodes are communicated with their real ID to the mobile opportunistic social network (MOSN).In current method, using FaceChange that can support both anonymizing real IDs among neighbour nodes and collecting real ID-based encountering information which also support the fine grained control over the information in encountering evidence. Only when the two nodes disconnect with each other, each node forwards an encrypted encountering evidence to the encountered node to enable encountering information collection. Here, we propose, Advanced extensions for sharing real IDs with the alias name or alias ID between mutually trusted nodes of trusted authority. The efficient encountering evidence collection are done by the exchanging encountering information between the nodes after communication are done. This exchange of information by encountering evidence shows the trustworthiness and validate the use by having the time, real ID, alias name which are in the encrypted form of cipher text with some advanced encryption algorithm and with signatures. The signature with the real ID based play the role for decryption which says about the trustworthiness and validate the user. This helps to verify the trustworthiness of the mutually trusted node of trusted authority and validity of the user nodes from malicious nodes.

Index Terms:—
Encountering evidence, mobile opportunistic social network, Tursted authority

Aerodynamic Analysis of Cascade Fin at Supersonic Speed

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Abstract:--

Lattice fin or Grid fin is a control and lift surface having an outer frame supporting an inner grid of planar surfaces having smaller chord length intersecting each other like a honey combed shape structure. The paper deals with the computational fluid dynamic analysis of supersonic flow past a new category of grid fins named as "Cascade fins" which do not have cross members but have planar members placed parallel to each other, at 2 Mach number at high angle of attacks. The primary objective of the paper is to study the effect on aerodynamic coefficients of cascade fins due to supersonic flow in relation with the subsonic flow effects. Comparison and analysis of the results with the cascade fin at subsonic flow with regards to increase/decrease of lift and drag can be used in various experiments done on the Grid fins.

Keywords: -

Grid fins, cascade fins, aerodynamic coefficients, supersonic flow

Performance of a 3 - Phase Induction Motor against Unbalanced Voltage Operation

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Abstract:--

For a 3- ϕ supply arrangement, voltage imbalance occurs when amplitude and the phase angle in phase voltage differs from the normal balanced conditions, or both. Unbalanced Voltage Factor have its importance when the study of effect of imbalance of voltage on the behavior of 3- phase induction motor. Problems like OV and UV, oscillations, increased losses & disturbance in phase angle are the main problem of unbalance voltage factor. Evaluation of thes abnormal conditions in the motor has main importance in the Induction machines. In this paper a actual load test to verification of the effect of the balance voltage and unbalanced voltages on the motor performance, have been investigated, including unbalance voltage factor, the importance of the +ve sequence voltage in the motor's apparent performance and importance of the –ve sequence voltage in the motors damage are pointed out. This is strongly recommended that the related regulations, derating factor and temperature rise curves of motor should be based on voltage Imbalance factor as well as on magnitude of +ve sequence voltage. In this paper the effect of the balance and unbalanced voltages on the motor performance have been verified just like +ve sequence, -ve sequence and rotor and stator current, speed, electromagnetic torque graphs.

Key-words:-

Phase induction motor, voltage unbalance factor, +ve and –ve sequence voltage, power factor, temperature rise.

Transmission Line Arrester and Its Application

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Abstract:--

In high-voltage transmission systems instrument transformers and circuit-breakers during the dead time of an auto-reclosing cycle are frequently damaged by direct multiple lightning strokesinto the conductors of overhead lines nearby a substation. These devices can be protected by arresters at the line entrance. An efficient and economical solution of a standard arrester integrated into a standard arrester is covered here, which allows the arrester to be installed without additional space requirements. The new device has been applied in 245-kV- and 420-kV-systems so far.Only for the 420-kV-system some modifications to the grading ring of the arrester had to be introduced. This paper presents information on the requirements on the arrester and the various applications of transmission line arrester.

Review of Accident Forecast Modeling of Oil and Gas Industries

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Abstract:--

Accident forecasting helps to take decision and makes plan before any injury and loss occur. For analysis of accident or the identification of potential hazardous sources, accident forecasting is more and more important because of occurrence of frequent accidents. The oil and gas industry is a major sector among other sectors and causes dangerous accidents. Therefore, the improvement of safety and the prevention of accidents plays important role in oil and gas industry. The Number of researchers developed different models depending on the available historical data based on past accidents for accident prediction & prevention. The present paper discussed fewmodels to fulfill above objectives, such as Bow tie model, Artificial Neural Network (ANN), Bayesian Network (BN), System Hazard Identification, Prediction and Prevention (SHIPP) methodology, Functional Resonance Accident Model (FRAM).

Keywords:-

Accident Forecasting, Bow Tie model, Neural Network, Bayesian Network, SHIPP, FRAM

Comparative Study of Seismic Performance of Fixed and Base Isolation of Multi-Storey Building

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Dr. G. R. Gandhe., Professor& HOD,Civil Engineering Dept., DIEMS Aurangabad, 431001, Dist. Aurangabad(M.S), India.

Abstract:--

Earthquake is one of major natural disaster in which many structures damage and collapse due to improper design against seismic forces. Earthquakes are affect the economy of the nation, so essential proper measures of prevention must be developed. There are many concepts of designing a building as earthquake resistant structure; the concept used in this paper is base isolation. There are many types of base isolation systems, lead rubber bearing (LRB) is used as base isolation system in this paper, LRB is most widely used as isolation system for buildings. In this paper, study of 8 storey building with regular floor plan of 20 m × 25 m size with fix at base and LRB at base is carried out. These building models are analysed using E-TABS 2015 software, to the action of lateral forces employing response spectrum method as per IS 1893 (Part I): 2002. The comparison of analysis of results in terms of story displacement, story drift, story shear and stiffness is presented here.

Keywords:-

Base isolation, lead rubber bearing (LRB), story displacement, story drift, story shear, stiffness etc.

Asian Options & Monte Carlo Methods

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Abstract:--

Price manipulation is reserved for commodity products with low trading volumes, Asian options play an important in pricing in such cases. Since there is no systematic solutions to arithmetic average options, iterative or numerical methods are used. Computer Simulation using Monte Carlo methods plays an important in this case. Various reduction techniques are also used to improve accuracy. This paper deals with Monte Carlo method's use in pricing options and also comparison with other options. Moreover paper also gives a thought to using Quasi Monte Carlo methods in pricing Asian options.

Keywords:-

Options, pricing, Asian, monte carlo methods

Simulation and Implementation of MIMO-OFDM System with STBC using GNU Radio and USRP

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Dr. Kishor Patil., Principal, Sinhgad Academy of Engineering,

Abstract:--

SDR provides an efficient and comparatively inexpensive solution to the problem of building multi-mode, multi-band and multi-functional wireless devices that can be enhanced using software upgrades. In this project, we seek to explore the viability of using GNU Radio; an open source SDR implementation and the Universal Software Radio Peripheral (USRP); an SDR hardware platform, to transmit and receive the OFDM signal with BPSK modulation using multiple antennas for transmission and reception. The combination of two technologies Multiple input multiple output (MIMO) and orthogonal frequency division multiplexing (OFDM) can cater very high rate data transmission. MIMO provides increased diversity gain without increasing the transmitting power whereas OFDM provides high data rates as it is a solution for Inter Symbol Interference (ISI) caused in dispersive channels. Here, in this paper the system performance of MIMO OFDM with Space time block coding (STBC) system is simulated using GNU radio software, plotting diagrams of received symbols with and without noise, the FFT and waterfall diagram. Quality of Service (QoS) in terms of Bit error rate (BER) on the data transmitted will then be investigated and analyzed for the implemented system.

Keywords:--

MIMO, OFDM, STBC, GNU Radio, USRP, Alamouti code, Wireless communication

Comparative Study of R.C.C and Steel-Concret Composit Multi-Storey Building Based On Sesmic Analysis

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Abstract:--

Steel-Concrete composite constructions are nowadays very popular due to their advantages over conventional Reinforced Cement Concrete constructions. Composite Construction combines the better properties of both steel and concrete along with economical, speedy construction, hazardous formwork etc. Hence the objective of this paper is to compare a R.C.C frame building and Steel- concrete composite frame building located in seismic zone-IV and analysis of (G+12) stories R.C.C frame building and Steel-concert composite frame building under the effect of earthquake using ETABS 2016 software. The method of equivalent static analysis has been used for the seismic analysis as per is 1893(part I):2002. The comparison of results analysis in terms of time period, axial force, story drift, story shear, is presented here. It is observed that Steel-concrete composite building is better option than R.C.C building.

Keywords:

Composite, RCC Structures, Earthquake, Time period, Axial force, Storey drift, Storey shear, etc.

An Android Application for Managing and Maintaining Health Condition of Pregnant Women

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Abstract:--

The purpose of this project is to develop an Android application that can provide a useful guide for the pregnant mom to manage their healthcare issues and maintain all necessary routine checkup with diets by themselves. The application will serve as an alternative to encourage self-care among the pregnant women in order to maintain a healthy weight gain during their pregnancy stages. This application is developed to bring convenience to the pregnant women and increase their self -care awareness. Mobile P2P Network has become part of P2P Network that also deals with various issues of cloud services when is accessed by portable devices in wireless environment. The pregnancy Healthcare data is relatively sensitive compared to other common data which need at most supervision. When Cloud services are accessed by the mobile devices additional challenge like security arises and correct time data delivery. Providing the Security and privacy for the pregnancy medical data is an interesting topic to deal with. In this paper the survey is done about the various challenges faced in Mobile based pregnancy Healthcare P2P Network and the existing scenarios along with pregnant women body checkup with medicine alert system. Our proposed system also consist of diet which is designed to provide the increased nutrients during pregnancy that are essential for the health of the mother and the well-being of the baby.

Keywords:

Data Security, Healthcare Sector, Medical Data Management, P2P Network.

Lets Join The Hands And Go Green For Mother Nature

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Abstract:--

This paper elucidates about generations of Biofuels based on substrate and it's applications, also the economics,policies and other factors affecting Biofuel generation.In Biofuel the organic materials generated from renewable biomass replaces the fossil fuels for energy purposes.It is a renewable resource.It's utilization has received great attention due to environmental consideration and increasing demand for energy worldwide.Since the energy crisis in 1970s many countries has targeted to utilize Biofuel as the source of energy.The development of Biofuel initiatives have reduced the environmental and ecological impact of energy production all over the world.bionergy accounts for almost 35% of primary energy consumption in developing countries.The most important Biofuel energy sources are feedstocks,agricultural waste byproducts,animal waste and algae.For generation of Biofuel several issues require careful analysis- (1) Availibility of feedstock(THE FOOD MATERIAL CANNOT BE USED FOR FUEL PRODUCTION DUE TO ETHICAL REASONS) (2) The chemical composition of feedstock (3) Availability of land (4) Resources (5) emission of greenhouse gases (6) Transportation of feedstocks (7) Storage of Biofuel (8) Economic value of feedstock taking into account (9) Injection of pesticides (10) Soil quality.Processes like transesterification which converts animal and vegetable oils into usable 2 fuel forms are reported.

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IOT Based Smart Garbage Bin Alert System

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Abstract:--

The new era of M2M and Internet of Things (IoT) paradigm is being enabled by the proliferation of various devices like RFIDs, sensors, and actuators. Smart devices are embedded in the environment to monitor and collect ambient information. The thought comes up for Smart cities there is a requirement for Smart waste management. The idea of Smart Dustbin is for the Smart buildings, Colleges, Hospitals and Bus stands. The Smart Dustbin thus thought is an improvement of normal dustbin by elevating it to be smart using sensors and logics. Smart dustbins is a new idea of implementation which makes a normal dustbin smart using ultrasonic sensors for garbage level detection and sending message to the user updating the status of the bin using GSM modem. As soon as the dustbin is full, it moves in the predefined path to reach the larger container with the help of Line follower robot. the govt. of India has recently launched a smart city project and for these smart cities to be smarter it is necessary that the garbage collection system has to be smarter and in addition to that the people need easy accessibility to the garbage disposing points and garbage collection process has to be efficient in terms of time and fuel cost.

Index Terms:—

Internet of Things, IR Sensor, Ultrasonic Sensors, Arduino Microcontroller, Wi-Fi Module, Garbage Bins, Mapping.

Frequent ITEMSET Mining Map Reduce

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Abstract:--

Data mining deals with the extraction of hidden predictive information from large databases. Main task of data mining is to discover action rules to take profitable decisions from huge database. However, with the exposing recent growth of size of data it is challenging to find out patterns of dataset. We have used a scalable approach for discovering action rules. The main goal of this algorithm is to build a mechanism that enables au-tomatic parallelization and data distribution for parallel mining of frequent itemsets on large clusters. We are proposing an algorithm inspired from FiDoop which run in-house Hadoop cluster. We are distributing dataset into number of blocks as each block allotted to each node for mining purpose. In this algorithm, we have pro-posed two parts, first part finds the frequent itemset in the dataset while the second part optimizes the efficiency of output. We also have optimized the mapper which gives high performance.

Keywords:—

Association Rule Mining, Apriori, FiDoop, Map Reduce, FP-Growth.

A Review on Advance Cooling Of Radiators by Using Nanofluids

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Abstract:--

After combustion of fuel the large heat is liberated inside the combustion chamber. The internal combustion engines are cooled by using either a liquid coolant or air. In air cooling system the air is flow over and around the cylinder, cylinder head and cylinder fins and carry away the heat. In water cooling system the coolant is circulate through a water jacket of cylinder head and cylinder wall. This coolant has absorb heat from the engine and dissipated to atmosphere by the device known as radiator. The Radiator contains number of horizontal tubes surrounded with fins. The heat is carry away by three modes of heat transfer namely Radiation, conduction and convection. Most of the convection takes place because of air flowing around the radiator fin and tube assembly and Conduction takes places between radiator tubes and fins. These coolant offer low thermal conductivity and poor heat transfer characteristics. There is large scope to design a high energy efficient, compact and light in weight automobile radiator by development of advanced nanofluids, which have better conduction and convection thermal properties and better heat transfer characteristics. This paper will introduce new concept of radiators that can use the high performance nanofluids. This advance cooling system also raises the total mechanical efficiency of the engine.

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GNU Radio-USRP-MATLAB based Laboratory set-up for Digital Modulation Schemes

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Abstract:--

The process of changing some characteristics of waveform with respect to the characteristics of other waveform is called modulation. To reduce practical antenna length, improve radiation efficiency of an antenna and to increase the operating range this process is needed. In digital modulation techniques there are different schemes such as BPSK, QPSK, QAM, PAM etc. The study, analysis, simulation and implementation of these techniques on different platforms are necessary such as MATLAB/SIMULINK, GNU radio and hardware platform like USRP. In this paper we have discussed about two basic techniques BPSK & QPSK and evaluated their parameters like constellation plot and BER using GNU radio on USRP and compared it with MATLAB results.

Index Terms:-

Modulation, GNU Radio, USRP, BER

Review on Crop Pests Forewarning With Weather Factors Using Machine Learning

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Saurabh Zarkar., Pimpri Chinchwad College of Engineering, Department of Information Technology
Priyanka Talele., Pimpri Chinchwad College of Engineering, Department of Information Technology
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Abstract:--

Overall climate change is nothing but diversity in the weather patterns of various regions of the world. The term "weather" refers to the short term changes in temperature, rainfall, and humidity of a region. With the up-gradation in data mining and its applications, data mining is extensively used to make smarter decisions in farming. Various meteorological data like- temperature, humidity, rainfall plays the vital roles in the growth of pests responsible for damaging the agricultural production. Effective forecasting of such pests on the basis of climate data can help the farmers to take prior actions to restrain the damages. This can also justify the use of pesticides, which are one of the sources behind soil pollution. In this study we are going to implement application, which gives the notification to farmers, if there is change in environment, so based on that changes which type of pest's along with their population affects the crop, such type of notification will be generated on web service portal. Weather based forecasting system can be treated as a part of the Agricultural Decision Support System, which is knowledge based system. Web service portal is used to collect the data regarding physical parameters, using a sophisticated web service platform, using longitude and latitude concept.

Index Terms:-

Agricultural Decision Support System (ADSS), Agriculture Prediction, Meteorological Data, Weather Monitoring, Web services.

Analysis and Design of Four Legged 400kv Multi-Circuit Transmission Line Tower with Different Bracing

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Abstract:--

Transmission tower design are very useful because they constructed to carry power lines at safe and sufficient distances from ground level due to high voltage. Transmission tower constitute 28 to 42% cost of transmission lines. Cost of tower depends upon its configurations and bracing patterns used. Bracing members enhance the stiffness and reduces the slenderness ratio of the tower. In the present study, four legged multi-circuit 400 kV self-supporting transmission towers having 20 line deviation consisting four different bracing models are considered. Four different bracing patterns i.e. inverted V bracing, XBX bracing, X-X bracing and W bracing are considered in the tower body. For analysis and design STAAD.Pro software is used as 3D space. For wind analysis IS 802 (1995) is used. Performance of towers with respect to axial forces and deflections is presented.

Key words:--

Angle sections, axial forces, bracings, deflections, multi-circuit tower, sag etc.

Comparative Analysis of R.C.C and Steel-Concrete Composite Residential Building Frame

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Abstract:--

Steel-concrete composite construction has gained large acceptance all over the world as a substitute for pure steel and pure concrete construction. However, this approach is a new concept in the construction industry. In this work we are creating the steel-concrete composite (G+10) frame using ETABS as an EIS-RC (encase I section column with RC beam), EIS-SB (encased I section with steel beam), CFT-RC (concrete filled square tube with RC beam), CFT-SB (concrete filled square tube with steel beam), CIS-SB (confined I section with steel beam), CIS-SB (confined I section with steel beam) and RCC frame. Static nonlinear pushover analysis is used for comparison of structures with the help of ETABS 2015 software. The majority of building frames are designed and constructed in reinforced concrete structures, depending upon the availability of constituent materials and the workmanship required in construction industry along with practicality of the existing design codes. Now a day to fulfill the demand of increasing population there is need of high rise building construction and today in India RC construction is popular to fulfill the demand of the construction industry.

Index Terms:-

Composite construction, Dead load, Base shear, Displacement, Inter-storey drift, Etab software.

Survey on Security and Privacy of Cloud

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Abstract:--
The cloud computing in recent years has become immensely popular because of virtual centralization of data and services. With the increasing use of cloud computing, security issues must be effectively managed such as confidentiality, authentication, integrity, and non-repudiation. As we have the cloud computing where in, the service and data maintenance is provided by some vendor which leaves the speaking, the client has no control over it. The cloud computing uses the internet as the communication media. When we look at the security of data in the cloud computing, the vendor has to provide some assurance in service level agreements (SLA) to convince the customer on security issues. In the proposed mechanism, new web service architecture will be developed that would simulate the web evaluation performance of the cloud computing services with all aspects of security issues. A simulation performance web service includes Software as a Service (SaaS), Platform as a Service (PaaS), Infrastructure as a Service (IaaS), Communication as a Service, Data Storage as a Service. This paper review the survey on cloud security and privacy in terms of application, data, runtime, middleware, operating system ,virtualization ,server ,storage ,networking and service level agreements (SLA).

Keywords:-
Data, runtime, middleware, operating system, virtualization, servers, storage, networking

Electromagnetic Projectile Launcher

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Abstract:--

An electromagnetic projectile launcher (EMPL) system accelerates and launches a projectile by converting electric energy into kinetic energy. There are two types of EMPL systems under development: The rail gun and the coil gun. A rail gun comprises a pair of parallel conducting rails, along which a sliding armature is accelerated by the electromagnetic effects of a current that flows down from one rail, into the armature and then back along the other rail, but the high mechanical friction between the projectile and the rail can damage the projectile. whereas A coil gun launches the projectile by the attractive magnetic force induced by the electromagnetic coil. A greater projectile muzzle velocity needs multiple stages of electromagnetic coils, that will make the coil gun EMPL system longer. As a result, the installation cost of a coil gun EMPL system is high because of the large installation site needed for the EMPL system. We present a coil gun EMPL system that has a new structure and arrangement for multiple electromagnetic coils to reduce the length of the system. A mathematical model of the proposed coil gsun EMPL system is developed in order to calculate the magnetic field and forces, and to simulate the muzzle velocity of a projectile by driving the electric pulsed current into multiple stages of electromagnetic coils. Using the proposed design, the length of the coil gun EMPL system is shortened by 31% compared with a conventional coil gun system while satisfying a target projectile muzzle velocity over 100 m/s.

Keywords:—

EML, electromagnetic projectile launcher, coil gun, multi-stage, muzzle velocit

Spectrum Occupancy Measurement, Analysis and Observation of Cellular Networks in India

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Abstract:--

Cognitive radio (CR) has been seen as a promising futuristic radio technology to reduce the spectrum scarcity problems. Here the unlicensed users can utilize the licensed spectrum until the licensed users are detected. In this work spectrum occupancy measurement campaign and its analysis for cellular service provider in India has been done. Measurement results shown that the spectrum band is under-utilized. Hence cognitive radio network CRN can be foreseen as a potential solution to reduce the spectrum scarcity paradox and to optimize the spectrum utilization. The measurement results show that the spectrum occupancy for Vodafone 900, Vodafone 1800, Airtel 1800, Idea 1800, Tata 1800, Reliance Jio 850, Reliance Jio 1800 and Reliance Jio 2300 band are 49.5017% , 26.5781%, 25.5814%, 30.5648%, 27.9070%, 11.9601%, 35.8804% and 36.2126% respectively. Out of the eight cellular bands most occupied cellular band is Vodafone 900 band which occupied 49.5017% spectrum band. It means that near about 51% spectrum is unutilized. The less occupied spectrum band out of eight bands is Reliance Jio 850 band which occupied 11.9601% only. Furthermore the results show that the bandwidth utilization of cellular service providers is not 100% even when the cellular operators in India are growing rapidly.

Index Terms:-

Cognitive Radio, Spectrum Occupancy Measurement, Cellular Bands.

Plant Growth Promotingactivity in Chickpea Crop by Using Various Combinations of Micro-Organism

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Abstract:--

The present investigation was carried out in the Department of Plant Pathology, College of Agriculture, (IGKV), Raipur (CG.). In the recent times, there has been a reversed interest in the search of plant growth promoting rhizobacteria (PGPR) for sustainable crop production. Biological control using PGPR strains especially from the genusTrichoderma and Pseudomonas is an effective substitute for chemical pesticides to suppress plant diseases. The present investigation was evaluated to growth promoting activities in pulse crop such as chickpea by using different thirteen combination ofTrichoderma sp., P. fluorescens and Rhizobium sp. five treatment used which were P. fluorescens(spray)+Trichoderma sp.(soil), P.fluorescens(soil)+Trichodermasp.(spray), P. fluorescens(seed)+Rhizobium sp.(seed)+Trichodermasp.(spray), P.fluorescens (spray) + Rhizobium sp. (seed)+Trichoderma sp.(soil). After 14 days of uprooting of crop found that significantly highervigour index in T1 (2794.69) treatment of chickpea. All treatment combination increases root length, shoot length and overall vigour index as compared to control in all pulse crops..

Keywords:-

Trichoderma sp., Pseudomonas Fluorescens, Rhizobium sp., Plant Growth Promotion, in vitro.

Experimental Investigation of Performance and Emission Testing of Sea Mango Seeds Oil Biodiesel in CI Engine

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Abstract:--

The consumption of fuel worldwide for transport, production and manufacturing industries, power plants, aircraft, aviation and naval transportation is growing. There has been an accelerating exploitation of the current oil and gas reserve which has brought about an increase of emission and pollution. One possible solution is the extended exploitation of biodiesel as an alternative fuel. Research says there are thousands of species of plants available in nature from which we can extract the fuel, it just needs to find out. Adequate research must be done on the choosing the right biofuel and the right proportion of its blend with diesel. Also one has to consider the economic point of view and thus viability of the biofuel. Considerable amount of work must be done in determining the affect the biodiesel can cause in the world fuel market. In the present work, Sea Mango seed oil is converted into their respective methyl ester through transesterification process. Experiments are conducted using various blends of Biodiesel of sea mango seed oil with diesel in a single cylinder, four stroke vertical and air cooled Comet diesel engine. The experimental results of this study showed that the Sea Mango biodiesel Blends has similar characteristics to that of diesel. The brake thermal efficiency, BSFC, Volumetric efficiency and Emissions are observed to be lower in case of biodiesel blends than diesel. The tests for B00, B06, B12, B18, B24, B30 and B36 are carried by varying load. Analysis showed that B12 blend give better results than other blends. From this study, it is concluded that optimized blend is B12 and could be used as a viable alternative fuel in single cylinder direct injection diesel engine without any modification.

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Analysis of Parking Guidance System Using Raspberry PI

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Abstract:--

In recent years the growing problems of car parking in urban areas are due to growing population. Due to these problems large numbers of vehicles are on roads and traffic jam, parking problems are arrived on large scale. The solution to such problem is to present the parking guidance system based on image processing technique with the help of Raspberry Pi and camera module. By using image processing technique will easy to find out the empty parking slot in public areas. After detecting the empty slot the detail information of empty slot is provided with printed slip to the car driver with the help of thermal printer hence one can able to park the vehicle at right place by showing the panel in parking areas. This intelligent system will reduce the time required to find vacant slot and wastage of resources. It also used to reduce fuel consumption and pollution which occur due to circulate vehicles for finding the parking areas.

Keywords:—

Image processin;Raspberry Pi;Camera module;Thermal printer

Behaviour of Transfer Girder for Different Shear Wall Locations

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Abstract:—
Today many high rise building adopted floating column for parking, assembly hall purposes. The load of floating column is a point load which is taken by transfer girder. These type of structure are danger in highly earthquake prone area because storey shear from all higher floor are not transfer to ground due to this discontinuity. This type of structure also called as stiffness irregularity. Shear wall is use in high rise structure to resist earthquake load and other lateral loads such as wind load. In particular structure floating column & shear wall used combine. For this type of structure we don't know best position of shear wall to reduce structural response of transfer girder. To find out best position of shear wall we analyze several model such as 10,15,20,25,30 storey with different shear wall locations and compare structural responses of transfer girder by conventional, construction stage analysis with EQ zone-IV and wind analysis with wind speed 47m/s in the form of bending moments, shear force and displacement with the help of ETABS V 2015.

Index Terms:—
Construction stage analysis, ETABS, shear wall, transfer girder, floating column, risk coefficient.

One Dimensional Study of Calcium Distribution in a Hepatocyte cell in presence of Buffer by Finite Volume Model

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Abstract:—
Calcium is ubiquitous second messenger which controls vital functions of almost all eukaryotic cells. Hepatocyte cell is parenchymal cell of liver. The regulation of calcium concentration in a hepatocyte cell is still not well understood. A model is proposed in this paper to study the distribution of calcium concentration in a hepatocyte cell in presence of buffers. The parameters like concentration of buffer, diffusion coefficient of calcium etc. have been incorporated in the model in the form of boundary value problem in one dimension. The boundary conditions have been formed to incorporate bio physiological facts of the problem. The finite volume method has been implemented to obtain the solutions. The program is developed on MATLAB 2014a to obtain numerical results and they are used to study the effect of buffers on calcium concentration in hepatocyte cell in steady state case. The information can be generated by developing such models of calcium concentration in hepatocyte cell for proper health care of liver.

Index Terms:—
Calcium, Buffer, Hepatocyte cell, Finite volume method.

Design and Implementation of User Configurable Industrial Human Machine Interface (HMI)

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Abstract:—
In process automation industry, operator interface is usually a Human Machine Interface Unit (HMI) which plays a significant role in creating a friendly visual environment between the user and the technology. It is considered to be the window to the automation control system. Controlling through finger touch has replaced the use of hammers and manual switches enormously. With the increasing application of HMIs in industry, a good number of software tools are being introduced and the competitiveness in designing HMI displays is increasing tremendously. This project focuses on various important aspects in designing HMI displays to meet the quality criteria such as ease and seamlessness in user understanding, efficiency of learning the HMI design software tools and satisfaction of the operators to control large systems. These aspects consist of issues with screen layout, color representation, graphics and pictures, text and data values, alarms, navigation, control and so on. The scope of this project is to gain knowledge about how to implement as much application in one limited display monitor, by multiple numbers of pages in a graphical hierarchy. This is needed to provide an operator with clear visual understandings of process operations with both moderate and complex applications. This project also consists of appropriate guidelines for designing an HMI unit in a most efficient way. As an example, we have designed an HMI unit intended to control a water bottle filling plant through Programmable Logic Controllers (PLC) systems.

Index Terms:—
Distributed Control System (DCS), Human Machine Interface Unit (HMI), Programmable Logic Controllers (PLC).

Retrofitting of Existing Structure with CFRP by using Pushover Analysis

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R. Suryawanshi., Asst. Professor, SCSCOE, Bhor

Abstract:—
The seismic evaluation of existing building is the strengthening of building for pre earthquake or post-earthquake. Strengthening is required to increase capacity of structure to resist specific demand of earthquake. Strengthening may be carried out in existing seismically deficient building or earthquake damaged building.Seismic evaluation and retrofitting are undertaken for the life -line building, such as hospital, police station, fire station, major administrative building, school, educational building, historical monument etc.. Mostly the strengthening of existing building carried by two ways i.e. jacketing and Carbon fiber reinforced polymer(CFRP).The aim of this paper to evaluate the response of existing building by using linear analysis and nonlinear analysis. The analysis was carried out on existing building which G+3 located in Pune (Seismic zone III) by SAP2000 with help of guidelines following code I.S 1893:2002 (Part I), FEMA356, ATC 40.Based on the result of analysis the capacity of existing building for the given demand earthquake .study and the structure was not achieved the specific demand of earthquake, strengthening of existing was carried out by using CFRP. The comparison of existing building with and without FRP was carried out ,It was observed that with retrofitting that building result which based on pushover curve, hinge formation pattern, and inter storey drift ratio formation was within limit..

Index Terms:—
Carbon fiber reinforced polymer (CFRP), linear analysis, nonlinear analysis, retrofitting.

Stress Analysis of V-Stirrer Blade Made For Conical Agitation for MDF

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Abstract:—
This work gives approach for performing stress and deflection investigation of a agitator of a substantial blending vessel utilized as a part of pulping process plant. The examination is completed to evaluate stress and deflection in agitator body. The agitator body is subjected to vibration due to multi-hub powers coming about because of bowing and torsional stacking forced by the blending activity. The approach followed in this work includes Stress examination of conical blade for unit dislodging utilizing FE strategy. The work likewise examines an elective approach for evaluating stress variation through ANSYS. Research work gives answer for building up the agitator with V shaped blade which is made by utilizing weldment systems. Stirrer blade looks V formed from Front view and roundabout center point is intended to hold the structure of agitator. Task gives result and approval based on software and additionally numerical device. This demonstrates the quality in outlined agitator. Along with agitation process of pulping stirrer is also considered which is mounted on top of the agitator hub.

Partial Replacement of Coarse Aggregate with Electronic Waste in Rigid Pavement

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Abstract:—

E-waste and plastic waste are the major problem in today scenario as these are non-biodegradable. Attempts were made in past to use them in concrete by grinding them. But it failed to give good strength because grinded particle has flattened shape. Grinded plastic and e waste mixed with concrete is a good way to dispose them with cheap concrete production. Electronic waste is an emerging issue posing serious pollution problems to the human and the environment. The disposal of which is becoming a challenging problem. For solving the disposal of large amount of E-waste material, reuse of E-waste in concrete industry is considered as the most feasible application. Due to increase in cost of normal coarse aggregate it has forced the civil engineers to find out suitable alternatives to it. E-waste is used as one such alternative for coarse aggregate. Owing to scarcity of coarse aggregate for the preparation of concrete, partial replacement of E-waste with coarse aggregate was attempted. The work was conducted on M20, M25 & M40 grade mix. The replacement of coarse aggregate with E-waste in the range of 0%, 5%, and 10% & 15%, Finally the mechanical properties and durability of the concrete mix specimens obtained from the addition of these materials is compared with control concrete mix. The test results showed that a there is not significant change in compressive strength up to 5% replacement of E-waste in concrete compared to conventional concrete and can be used effectively in rigid pavement. The reuse of E-waste results in waste reduction and resources conservation.

Index Terms:—

E-waste, Durability, Reuse, Compressive strength , Flexural strength.

Combined Approach for Masquerade Detection Using Behavior Profiling and Decoys

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Abstract:—
Insider data theft attacks are caused by a masquerader stealing a real user's credentials and using them to mimic the authenticated user and to carry out malicious activities. Prior work focus on user behavior profiling techniques and baiting techniques, but profiling user behavior using single modeling technique suffers from a considerable number of false positives. Also decoys are stored at noticeable locations rather than using automatically generated decoys which may not give significant accuracy to the detection system. Proposed system will extend prior work and presents an inbuilt detection mechanism where behavior profiling will be done by combination of more than one classifier, each using different modeling technique to decrease false positive rate. Along with this, the system will include a baiting approach based on automated generation of demand decoy documents on the user's file system and user authentication by challenge questions, to provide more accuracy. Proposed system could give a powerful protection mechanism against malicious insider data theft attacks.

Index Terms:—
Insider data theft, Behavior profiling, Naïve Bayes Classifier, One Class Support Vector machines, decoys.

Cyberbullying Detection & Prevention for Social Media Using Data Mining

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Awade Milind Shravan., RDTC- SCSCOE, Dhangwadi
Kadam Aishwarya Mahesh., RDTC- SCSCOE, Dhangwadi

Abstract:—
The increasing use of social communication networks by their users leads to huge amount of user-generated communication data. Due to the popularity of social media cyberbullying become the major problem in online communication and cyberbullying behavior received more and more attention. Cyberbullying may cause many serious and negative impacts on person's life and even leads to teen suicide. In the existing system the set of unique features derived from Twitter such as network, activity, user and tweet contents. By using these features the cyberbullying words which are presented in the comment contents are detected using data mining algorithms. The rumor comments are detected using syntactic and semantic techniques. The cyberbully detection and rumor detection on social network are done separately in the existing technique. In the proposed work the detection of cyberbully words and rumor comments on social media are integrated into a single application, along with these the cyberbully contents in the post. Comments will be detected using Pattern Matching algorithm.

Index Terms:—
Cyberbullying, social-network, Cyber harassment, Text mining

Product Recommendation from Textual Reviews Using Hybrid Filtering Approach

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Abstract:—

The amount of information on the internet grows rapidly and people need some system to find and access appropriate information. Recommender Systems (RS) are currently useful in both the research and in the commercial areas. RS are information filtering systems that deal with the problem of Information Overload. The existing recommendation is based on POI (Point of Interest), Geographical location, User Preference learning and algorithms like LDA, OGRPL (Online Graph Regularized User Preference learning) are used for information extraction and also use the Attribute Pruning (AP), Frank-wolfe algorithm for improving the performance of the system with some limitation like high retraining cost, unable to capture change in preferences, work for specific value of k. The propose system recommendation is base on sentiment prediction from textual review using the LDA for feature extraction and is originally based on Hybrid Filtering Approach. K numbers of products are recommended to the user. Hence, proposed system improves the prediction accuracy of recommendation system

Index Terms:—

RS, Sentiment prediction, Hybrid Filtering Approach, Conflation algorithm.

Improved Zone Based Routing Protocol for MANET

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Abstract:—

Mobile Ad-hoc Network (MANET) is a infrastructure less, self organizing and self-configurable wireless network of mobile nodes. The MANET has a dynamic nature that makes the network topology change frequently. Zone routing protocol is typical hybrid routing protocol in MANET. It combines proactive with reactive strategies, it applies a proactive strategy inside the zone and reactive strategy outside the zone. As each node in the scenario maintain a route table, there are lots of overlapping areas in the whole scenario. These overlapping area produce redundant or duplicate route request. To overcome this drawback we developed Improved Zone Based Routing Protocol for MANET. In this protocol we minimize the Zone overlapping, and also minimise the duplicate route request. In high mobility MANET, the fast change of topology increases the complexity of routing. We define new parameter the mobility of the node, using this parameter we choose best node as zone head and also best path for transmission.

Index Terms:—

REEQ,RREQ.ACK,Mobility factor.

A Review on Software-Defined Wireless Sensor Networks (SDWSN) and its Challenges

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Abstract:—

Software Defined Networking brings about innovation, configuration in network computing and simplicity in network management. SDN technology is an enormous approach to cloud computing which facilitates network management and enables efficient network configuration programmatically that improves network performance and monitoring. WSN consist of nodes that interact with the environment to achieve the sensing task thereby sensing the physical parameters such as temperature, pressure, volume etc and also help control them. These nodes can perform computation, sensing, actuation and wireless communication functions, particularly with the advent of Internet of Things (IoT)that is essential for monitoring several objects in applications such as smart cities, smart water networks, smart health care, smart power grids, smart farming and intelligent transport systems etc WSNs are continuously becoming important .Traditional networks often lack flexibility that brings into effect instant changes because of the rigidity of the network. It also depicts over dependency on proprietary services. SDN separates the control plane and the data plane, therefore moving the control logic to a central controller from the node. WSN is a very good platform for Low-Rate Wireless Personal Area Networks (LR-WPAN) with minimum resources and short communication ranges. Although the scale of WSN expands it faces many challenges, namely heterogeneous-node networks and network management. The approach of SDN seeks to alleviate most of the challenges and hence foster sustainability and efficiency in WSNs. The combination of SDN and WSN gives rise to a new prototype named as Software Defined Wireless Sensor Networks (SDWSN). The SDWSN model is therefore envisioned to play a vital role in the IoT paradigm. This paper presents a review of the SDWSN literature. Also it takes care of the challenges facing this paradigm.

Index Terms:—

Wireless sensor networks, Software defined networking, Software defined wireless sensor networks.

Smart Industry Based Environment Monitoring and Conrolling System

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Abstract:—
A smart city enables the effective utilization of resources and better quality of services to the citizens. To provide services such as air quality management, weather monitoring and automation of homes and buildings in a smart city, the basic parameters are temperature, humidity and Co and Light intensity, gas leakage. This project presents a customised design of an environment monitoring system to monitor temperature, humidity and CO and Light intensity, gas leakage. In this project we have used an ARM controller as main controlling unit, a Wi-Fi module to let know the condition of environment of particular area to the authorized user, sensors like gas sensor, temperature and humidity sensors for monitoring environment and light, motor and buzzer as output device who has to work according to the environmental conditions, decision about how the output devices has to work is took by the main controller unit

Index Terms:—
Internet of things, smart city, ARM.

Smart Medication Box for Memory Disorder Patients

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Abstract:—
In stressful life people ar e prone to different types of diseases and accordingly varieties of medicine are increased. In ICU's of health care centers patients are monitored through experts and advanced machineries to give the proper treatment. But in general ward and at home continuous monitoring is not always be possible. Many of times patients are not able to remember their medication time without the active assistance of a caregiver. This restricts their ability to live independently. This paper des cribes the design and develops a smart medication box which reminds the patients to t ake proper medicine within stipulated time.

Index Terms:—
Arduino, caregiver, power jack, brace matching.

Online Chatting System for College Enquiry using Knowledgeable Database

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Abstract:—
A chatterbot or Chatbot aims to make a conversation between both human and machine. The machine has been embedded knowledge to identify the sentences and making a decision itself as response to answer a question. The response principle is matching the input sentence from user The present technical project consist of developing an expert System for college enquiry desk using an android based Chabot, through Artificial Intelligence technology virtual assistance (Human-machine conversation),transmitting natural language to a server.

Index Terms:—
About : Artificial intelligent, Database Application ,Data Mining.

Testing Machine of Metal Can Coating By Using Arm7 Processor

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Deepak Bade., Department of Electronics and Telecommunication Engineering, Shri Chhatrapati Shivajiraje College of Engineering, Bhor, Pune, (M. S.), India
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Abstract:—

A specialized machine device is designed which checks the coating of metal cans. The metal cans are made up of aluminum metal. It is highly reactive, so coated with paint to check coating is uniform or not. This machine will test metal cans i.e. uncoated areas are present inside the metal cans or not. Metal cans are coated by using sprays .So sometimes some small areas on internal side of metal can remain uncoated, they gets reacted with internal stored sprays. This will affects quality of product. So we are designing this machine to improve quality of product. It will test metal can is properly coated or not. It will display porosity value on LCD. It uses principle of electrolysis. Electrolysis means process of by which current will pass from one electrode to another through ionized solution. Metal Can under test is provided with anode and cathode assembly. If there is no current flow, it indicates metal can is ok. If current flow occurs, then indicate metal can is not ok.

Index Terms:—

ARMLPC2148,Electrode, LCD, and LED.

Semiautonomous Underwater Monitoring System

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Abstract:—

In one of the most rapidly advancing field in technology spectrum in robotics. The need of system to work to hostile environments, those human cannot work easily like the deep sea environment or natural disaster affected environment led to the development of remotely operated robot. Underwater robot are nowadays used by treasure hunter, underwater forensics, rescue workers, fisherman, Nature videographers and so on. The project has been develop for surveillance purpose. It can research to carry out underwater operation.it capture underwater defect, leakage, temperature and send high resolution image to user.

Index Terms:—

Arduino, Raspberry pi, Dc motors, LED, camera, propeller.

Automatic Food Feeding Machine

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Dattatray B. Raut., Rajgad Dyanpeeth Technical Campus, Shri Chhatrapati Shivajiraje College of Engineering, Dhangawadi, Bhor, Pune, Maharashtra
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Abstract:—

This project suggests associate integrated system that provides an entire new completely different choice for Automatic Food feeding. It aims in feeding the animal foods. The foods are feuded initial and so captive on the conveyor. The conveyor can delivered every food to its various Areas storage unit thereby eliminating the monotonous work done by human, achieving accuracy and speed within the work. For this we have a tendency to use conveyor system to convey the food to the various animals. Rail radio-controlled feed wagons are employed in this technique for loading & unloading of food. One in all these project objectives is exchange man power with machine.

Design of Petrol Supply System by Using Licence and Biometric Module

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Arati Bhargude., Department of Electronics and Telecommunication Engineering, Shri Chhatrapati Shivajiraje College of Engineering, Bhor, Pune, (M. S.), India
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Abstract:—
To check non-licences for driving and consequently happening the accidents one of the new system is introduced. Biometric verification is one of the most well-liked and personal biometric verification system. This system consists of a some amount of memory capability to store the thumb print of particular person. Although providing the licence, the particular candidates thumb print reader is to be stored in the memory of reader. Vehicles like cars, bikes etc. must have a reader capable of reading the particular licence. The similar vehicle should have the capacity of thumb print reader component. A man, who is going to drive the vehicle, should keep the thumb on the reader and inserted card (licence) in the vehicle, if the thumb print stored in the module and swiped card are match, if and only if he/she can drive the vehicle, otherwise petrol supply will not work. So that system increase the safe keeping of vehicles and also ensures protected driving by prevent accident because of authorized persons.

Keywords:-
Licence, card reader, thumb print.

Design of Low Cost Human Body Parameters Measuring Device

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Abstract:—
Many times in rural areas of India as well as other undeveloped countries many people die due to improper prima fascia treatments before reaching to the health care centers. Now days due to social media people are aware of many of primary treatments. The aim of this paper is to design and develop a low cost device for measuring different human body parameters such as temperature, pulse rate and lungs capacity. The proposed system can be used for measuring these parameters for prima fascia treatments at home as well as in OPD's.

Keywords:-
Beats, Lungs capacity, Microcontroller, Spirometer, and Software

Advancement in an Engineered Cementious Concrete

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Abstract:—
A review of representative research on the behavior of PVA-ECC concrete under flexure and shear action. Concrete is most widely used material but its brittle behavior is one of the most serious problem. This problem can be overcome by using ECC concrete which contains PVA fibers in place of course aggregates and fly ash replacing cement partially. The various materials which are to be used are ordinary Portland cement, fly ash, PVA fiber, Sand, Super plasticizer and water. Super plasticizer is to be used to control rheological properties of fresh concrete. PVA fiber are selected because they have strong bond with the concrete matrix, strain hardening property and provide pseudo-ductility to the concrete there by increasing flexural and shear strength. The seismic disturbance to a structure can be partially stabilized with the help of ECC concrete

Keywords:-
PVA fibre (Poly-vinyl Alcohol fibre), ECC (Engineered Cementious Concrete), fly ash, psuedo ductility, strain hardening.

Design Modeling and Experimentation of Linear Motion Transducer by Using Flexural Bearing

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Shrikant B. Jadhav., Assistant Professor, Rajgad Dnyanpeeth's Shri Chhatrapati Shivajiraje College of Engineering , Dhangawadi, Tal-Bhor, Dist-Pune, Maharashtra
Deepak A. More., Assistant Professor, Rajgad Dnyanpeeth's Shri Chhatrapati Shivajiraje College of Engineering , Dhangawadi, Tal-Bhor, Dist-Pune, Maharashtra

Abstract:—
The availability and wide range of applications of low cost sensors have encouraged a demand for improved sensor performance. Smart sensors are becoming integral parts of system and are performing the functions that previously could not be performed. Displacement can be measured by using precise measuring instruments such as LVDT, laser instruments which offers high speed, high resolution and highly accurate laser sensors (non-contact linear position sensor) for measuring displacement and position. But all these instruments are very costly and require high maintenance and they are very complex in design. So there is need to develop a system which gives high accuracy as that of existing measuring instruments and should also have low manufacturing and running cost. Proposed system consists of unique design of flexural bearing which is highly sensitive to axial movement. Deflection of bearing is recorded by the strain gauges in the form of resistance. This resistance is converted into the voltage form using strain gauge module. This voltage is given to ARDUINO microcontroller and using MATLAB program the results are generated.

Keywords:-
Flexural bearing, FEA, Strain gauge, MATLAB, ARDUINO.

Carbon Nanotubes: A Review on Synthesis, Properties and Applications

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Abstract:—
Carbon nanotubes (CNT) stands as one of the most unique inventions in the field of nan¬otechnology. CNTs are made up of graphene with SP2 bond. The important aspects of CNTs are their light weight, small size with higher aspect ratio, high toughness, high elastic moduli and good conducting characteristics, which makes them useful as fillers in different materials such as composite materials, metallic surfaces and ceramics. There are various techniques which can be used for the synthesis of CNTs. The various techniques used to produce nanotubes in sizeable quantities include arc discharge, laser ablation, chemical vapor deposition and flame synthesis method. CNTs are categorized as single-walled, double walled and multiple walled nanotubes. The eye-catching features of CNTs are their electronic, mechanical, optical and chemical characteristics, which opens a way to future applications. CNTs also have potential applications in the field of nanotechnology, nanomedicine, tran¬sistors, actuators, sensors and capacitors. The present review is focused on the synthesis and purification, functionalization, properties and applications of CNTs.

Keywords:-
Carbon nanotube, Synthesis, Functionalization, Mechanical properties, Applications

Opinion Classification by Rating Prediction using Sentiment based Textual Review

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Abstract:—

In today life individuals are associating with the Internet and social networks, User shares their opinions on the web so there is a basic issue of data over- overloading. Users can't without much of a stretch trust on other individuals people review; each user has distinctive reasoning on a single product. So there is much data exhibit in online textual reviews, which assumes a vital part in decision making. For instance, the user chooses what to purchase in the wake of observing valuable reviews posted by others as users effectively confide in their companions or friends. People believe in reviews and reviewers because it helps in rating prediction. Rating prediction is based on the idea that high-star ratings mean it is related to the good reviews and this thing affects the consumer. How to mine reviews and the relation between reviewers in social networks has become an important issue in web mining, machine learning, and natural language processing. Reviews contain detailed information along with user opinion information, which is important for a user to choose a product to be purchased. Some people had thought about price, quality and other comparative factors. All these factors describe the user's interests according to their comments on the product. Many products or items are unrated in a user-item-rating matrix, hence it's necessary to leverage user reviews to predict the unrated items for making the rating. Sentiment analysis is the most fundamental and important work in extracting user's interest preferences. Interpersonal interaction is difficult for extracting user's preference. To overcome these problems propose a sentiment-based rating prediction method by using a framework of matrix factorization. The contributions of the proposed approach are 1) user sentiment analysis. 2) Rating prediction using sentiments. User sentiment influence reflects how the sentiment spreads among the trusted users. Item reputation similarity shows the potential relevance of product. To carry out an accurate recommendation system fuses user sentiment similarity, item reputation similarity, and Interpersonal sentimental influence into a matrix factorization framework.

Keywords:-

Opinion classification, rating, prediction, sentiment, textual review, product, similarity.

Performance of Microbial Fuel Cell with Clayware Wall Separation Subjected to Variation in Area of Separation, Permeability, Temperature

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Abstract:—

Microbial fuel cells (MFCs) are devices that can used to convert chemical energy stored in biodegradable materials into electrical energy. Sustainable energy recovery from organic wastes is gaining a research interest from last few years. Microbial fuel cell will be cost effective technology, if replace costlier proton exchange membrane with cheapest alternative. Hence, the performance of MFCs was evaluated using soil partition as alternative to proton exchange membrane. Performance of six microbial fuel cells (MFCs) was investigated in terms of current, columbic efficiency and chemical oxygen demand removal efficiency under batch mode of operation using aerated distilled water as a cathodic electrolyte. Effect of permeability, surface area of partition, ambient temperature variation and substrate concentration were evaluated. It was observed that current and coulombic efficiency increases with increase in surface area and permeability of partition wall. It was observed that ambient temperature plays vital role in energy harvesting and treatment efficiency.

Keywords:-

MFC, Current, Voltage, Bio-energy, Waste water treatment, Alternative to PEM

Design and Implementation of Smart Helmet for Coal Mining Using Wireless Sensor Network

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Jyoti kshirsagar., Department of Electronics and Telecommunication Engineering Shri Chhatrapati Shivajiraje College of Engineering, Bhor, Pune, (M. S.), India
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Abstract:—
This paper focuses on a mine supervising system which is based on the cost effective system. Our paper aims at developing a wireless sensor networks, realized real time surveillance with early-warning intelligence on harmful gases, temperature, humidity in mining area and used wireless communication to reduce potential safety problems in coal production using a wireless technology. All these three parameters are detected continuously by temperature sensor, gas sensor, Heartbeat sensor and if they cross the predefined limit, then the user gets alert through the buzzer. Arduino controller(ATmega328) collects the sensed data and alerts the server system. With a Wireless positioning devices, the system might be easily extended. The values of different sensors are continuously transmitted and received by wifi module to the remote monitoring unit.

Keywords:-
Arduino, Buzzer, Wifi Module, Sensors.

A Wireless Machine Gun for Self-Defence

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Suraj S. Ombale., Department of Electronics and Telecommunication, Shri ChhatrapatiShivajiraje College of Engineering, Dhangawadi.
Akshay V. Parthe., Department of Electronics and Telecommunication, Shri ChhatrapatiShivajiraje College of Engineering, Dhangawadi.
Ram P. Shahapure., Department of Electronics and Telecommunication, Shri ChhatrapatiShivajiraje College of Engineering, Dhangawadi.

Abstract:—
Now-a-days we use manual method on the borders of the country or during wars i.e. the soldiers continuously observe any of the terror movement on the actual line of control. These systems are not safe for the soldier's life and there are ample of chances of mistakes and dangers. The Automatic Machine Gun is mainly designed to provide remote accessibility using wireless technology (RF Module) by using ATmega328P microcontroller which is control machine and robot for land soldiers in battle field.The aim of the proposed system is to build a system which will offer the world's most complete line of remote armed delay/denial and unarmed reconnaissance platforms. It is designed to keep enemy out of the line of control. This system can be very useful in ground level combat and save most worthy human life.

Keywords:-
ATmega328P, Automatic Machine Gun, Robot, RF Module

Irrigation System Using IoT

Manisha H.Gholve., Assistant professor, Department of electronic and telecommunication,SCSCOE

Abstract:—

Irrigation is the application of controlled amounts of water to plants at needed intervals. Irrigation helps grow agricultural crops, maintain landscapes, and revegetate disturbed soils in dry areas and during periods of less than average rainfall. Irrigation also has other uses in crop production, including frost protection. Water is the main criteria in irrigation. Now days level of water is decreasing .So it is important to save water. In this proposed system, there is use of subsurface textile irrigation with the help of IOT and also various sensors like temperature, humidity, soil moisture sensors which sense the temperature, soil moisture of the soil. These sensed parameters will be displayed on user android application.

Keywords:-

Irrigation, IOT ,android.

Vehicle Location Tracking and Control using Secured Wireless Networks

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Dr. N. Gomathi., Pofessor, VelTech Dr. RR and Dr. SR University, Avadi, Chennai.

Abstract:—

Now a day, automobile thefts are great concern increasing at an alarming rate all over the world. Increasing the density of vehicles creates a problem in large number security of vehicle. Solution to this problem new approach is developed for providing security to vehicle by developing secured vehicle management system for control and tracking. In this system the user will control his vehicle through an android application. A secured mode of communication between Smartphone and vehicle is established via GSM network where authentication is done before establishing communication. Using Smartphone, the owner will be able to lock/unlock the vehicle and track the vehicle in case of theft. If the GSM network is not available then the secured Bluetooth mode is used for communication. The performance of the proposed scheme is evaluated on the metrics such as end to end communication between user and vehicle.

Keywords:-

Global Positioning System, Subscriber Identity Module, GSM network, Bluetooth.

The Reinforcement of Carbon Nanotubes in Epoxy-based CFRP Composites

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Amruta P. Sonawane., Assistant Professor, Rajgad Dyanpeeth Technical Campus, Shri Chhatrapati Shivajiraje College of Engineering, Dhangawadi, Bhor, Pune, Maharashtra.
Dattatraya B. Misal., Assistant Professor, Rajgad Dyanpeeth Technical Campus, Shri Chhatrapati Shivajiraje College of Engineering, Dhangawadi, Bhor, Pune, Maharashtra.

Abstract:—
Epoxy or poly epoxide is a thermosetting epoxide polymer that cures (polymerizes and cross-joins) when blended with a curing operator or "hardener". Most basic epoxy resins are created from a response amongst epichlorohydrin and bisphenol-A. Epoxy tar is most generally utilized as a lattice for cutting edge composites because of their unrivaled warm, mechanical and electrical properties; dimensional solidness and synthetic protection. Epoxy surface coatings are among the most broadly utilized modern completes and give unrivaled attachment, adaptability and consumption protection when connected to metallic substrates. Epoxy gums are likewise utilized with different curing specialists, diluents and properties.

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Synthesis of Nanoparticles by Solid Liquid Interface Technique by Cds/Hgs Nanoparticles.

Rajaram.B.Raut., Assistant Professor, Rajgad Dnyanpeeth's Shri Chhatrapati Shivajiraje College of Engineering, Dhangawadi, Tal-Bhor, Dist-Pune, Maharashtra.

Abstract:—

Nano science is the study of atoms, molecules and objects whose size is on the nanometer range. The study of nonmaterials is different than that of the molecule on the larger scale because Physics is different on the nanometer scale. Nanotechnology can be defined as the science and engineering involved in the design, synthesis and characterization and applications of materials and device whose smallest functional organization in at least one dimension is on the nanometer scale. One of the simple and most common technique of applying thin film onto wafers is the technique of "spin coating." The process involves simple fluid flow and evaporation behavior that generally give rather uniform coatings. SLIRT technique is a modified form of a spin coating. So in spin coating the general design is that there is a platform that holds a substrate on which the film is to be deposited. In general spin coaters the substrate is held by a vacuum pipe connected directly beneath the substrate, but science in modified technique we use two substrate thus this arrangement could not be used. Thus, there must be some arrangement to hold both the substrates together. To overcome this problem we used an overhead assembly in which a metal plate of the same dimension as the platform is kept over the platform separated by the some distance with the help of screws attached at the periphery. The two substrates are then keep at the centre of the platform. A substrate holder is introduced from center of the overhead metal plate and tightened over the substrate. This assembly is then fix to the shaft of motor. The SIRT technique required a speed at high as 3000-4000 r.p.m. The motor used in the device is of 8000 r.p.m.

Keywords:-

Characterization for SEM (Scanning Electron Microscope), Characterization for TEM(Tunneling Electron Microscope), XRD,

Review on Advance towed Artillery Gun System

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Abstract:—

A Nation cannot be economically strong without Strong Defence. So, the defence is main factor for developing any country. India is developing country and India has DRDO (Defence Research and Development Organization) and ARDE (Armament Research and Development Establishment) to take care of Researches in Defence sectors. Indian Defence Ministry allows privet manufacturer to contribute in the production of the defence product. DRDO has launched the Advance Artillery Gun in collaboration with the Manufacturer Partner TATA Group and Bharat Forge LTD. named Advance Towed Artillery Gun System (ATAGS). ATAGS has several advantages over the recent artillery gun. ATAGS is the 155*52 Caliber gun which has firing range 45 km. ATAGS has made the world record to fire the range up to 48.074 km. during Indirect Firing. Production of Gun will start by 2019 on large scale at TATA Group and Bharat Forge LTD.

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Detection and Classification of soybean leaf diseases using K-means Clustering

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Dr.Sanjay B. Patil., Professor & Principal, Department of E&TC, Rajgad Dnyanpeeth Technical Campus Bhor, Pune, India

Abstract:—

Soybean Blight Brown Spot, Soybean powdery mildew and Downy Mildew are most common destructive foliar diseases of soybean, and can cause significant yield loss. Timely application of fungicide, in the early stage of fungal infection, is important for effective control of the disease, and is largely dependent upon the capability to quantitatively detection of the infection. The main purpose of this work is to identify and classify the soybean leaf disease based on the symptoms that is visible in leaf image. In this paper Color based segmentation method (K-means clustering) has been in corporate for separating the infected region from the leaf image. The infected stains are characterized by the features like color and textures. In the classification phase the color co-occurrence features, based on SGDM, are extracted and compared with the corresponding feature values stored in the feature library.

Index Terms:—

K-means, Segmentation, Color feature, Color space, SGDM.

Review on Free Piston Engine

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Abstract:—
The research of the Free Piston Engine is taking up pace since the last two decades mainly carried by the Dutch companies NOAX and the Innas. The research in free piston engines has recently concentrated on hydraulic versions but some development in electric version has also been reported. This seminar mainly discusses the case study of the CHIRON (Pronunciation ky'-rahn) Free Piston Engine, which is a hydraulic free piston engine developed by the Dutch companies Innas, and NOAX. CHIRON in the Greek mythology was a Centaur: neither a horse nor a man but a synthesis of a man and a horse. Similarly, the CHIRON discussed in this paper is neither an engine nor a pump: it is a combination – or better – an integration of an engine and a pump. In CHIRON the combustion energy is directly converted in to Hydraulic energy. The CHIRON features direct electronic control of the injection parameters, the flow and the compression ratio. The flow output is controlled by means of Pulse Pause Modulation of the piston frequency. The CHIRON is designed for the common pressure rail systems. In these systems, the hydraulic energy is supplied through a common rail. Special attention will be paid specific characteristics of the CHIRON compared to conventional engines and pumps.

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Review on Underwater Missile Technology

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Suvarna D. Khakal., Student, Rajgad Dyanpeeth Technical Campus, Shri Chhatrapati Shivajiraje College of Engineering, Dhangawadi, Bhor, Pune, Maharashtra
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Abstract:—
The battle of the Atlantic in World war 2nd led to enormous advance in underwater weapon system & their associated sensors to increase range & capability. The technological revolution of the last 4-5 decades has seen drastic change in the war of sea, with the torpedo replacing the depth charge. As major antisubmarine weapons and torpedo itself being modified or in some cases replaced in the anti-shipping role by the guided missile. There are very few countries dealing with production & design of this technology such as Russia, UK (Royal Navy) USA, Sweden & German. In Anti-Submarine Warfare (ASW), underwater missile has no alternative. As the researches proceed, torpedo /missile modified from heater steam torpedo to the world's fastest underwater missile – SHKVAL (squll). This modern missile does not give little chance to target to move.