ICTIEM-2018

IFERP - ICTIEM

ICTIEM-2018

IFERP®
connecting engineers... developing research

MSPM's Let us Rise Above The Rest
DIEMS

# ICTIEM-18

## International Conference on Technological Innovations in Engineering and Management

26th & 27th February 2018

Aurangabad, Maharashtra

Organized by:

Deogiri Institute of Engineering and Management Studies.

and

Institute For Engineering Research and Publication(IFERP)

ISBN: 978-81-932966-8-4

# ICTIEM – 18

## INTERNATIONAL CONFERENCE ON TECHNOLOGICAL INNOVATIONS IN ENGINEERING AND MANAGEMENT

**Aurangabad, Maharashtra**

**26th - 27th February, 2018**

Organized by:

**Deogiri Institute of Engineering and Management Studies**

and

**Institute For Engineering Research and Publication**

## *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 ***Deogiri Institute of Engineering and Management Studies,*** Aurangabad, Maharashtra. I am delighted to welcome all the delegates and participants around the globe to ***Deogiri Institute of Engineering and Management Studies, Aurangabad*** for the ***"International Conference on Technological Innovations in Engineering and Management (ICTIEM-18)"*** Which will take place from ***26th -27th February '18***

Transforming the importance of Engineering, the theme of this conference is ***"International Conference on Technological Innovations in Engineering and Management (ICTIEM-18)"***

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 & DIEMS)** 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 ***Aurangabad, Maharashtra.***

Sincerely,

**Rudra Bhanu Satpathy**

# Preface

The ***"International Conference on Technological Innovations in Engineering and Management"*** is being organized by ***Deogiri Institute of Engineering and Management Studies***, Aurangabad, Maharashtra in association with ***IFERP- Institute For Engineering Research and Publication*** *on the 26th- 27th February' 2018*.

***Deogiri Institute of Engineering and Management Studies*** has a sprawling student –friendly campus with modern infrastructure and facilities which complements the sanctity and serenity of "The City of Gates" of Maharashtra in Aurangabad.

The ***"International Conference on Technological Innovations in Engineering and Management"*** was a notable event which brings academia, researchers, engineers, industry experts and students together.

The purpose of this conference is to discuss applications and development in area of **"Engineering and Management**" which were given international values by ***Institute For Engineering Research and Publication (IFERP).***

The International Conference attracted over 200 submissions. Through rigorous peer reviews 139 high quality papers were recommended by the Committee. The Conference aptly focuses 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 are also thankful for the cooperative advice from our advisory Chairs and Co-Chairs. We thank all the members of our local organizing Committee, National and International Advisory Committees.

# *Director Message*

**Dr. U.D. Shiurkar**,
Director
D.I.E.M.S, Aurangabad

## MESSAGE

I am indeed proud and privileged to organize Two days "**International Conference on Technological Innovation in Engineering and Management" (ICTIEM-2018)** by Deogiri Institute of Engineering and Management Studies, Aurangabad on 26th and 27th February 2018 at D.I.E.M.S. Aurangabad. The Conference is jointly organized by Institute for Engineering Research and Publication (IFERP). with the advent of new technologies in the engineering and management it is necessary to bring all the concerned at one place to exchange varied methodologies of this field. I am sure, this conference will benefit to the professors, researchers, scientists, academicians and policy makers of Engineering and Management.

I am delighted to brief about D.I.E.M.S. Marathwada Shikshan Prasarak Mandal which is one of the oldest organizations in Marathwada. The Mandal has established a land mark in the Education field. Continuing its rich legacy, the Mandal has started Deogiri Institute of Engineering and Management studies in the academic year 2009. Deogiri Institute of Engineering and Management Studies which is approved by AICTE, Government of Maharashtra and affiliated to Dr. Babasaheb Ambedkar Marathwada University. Our Institute holds the pride of place being one of the top engineering institutions in Marathwada within a very short period of time. National Assessment And Accreditation Council has accredidated B++ grade on the basis of excellence and adequate infrastructure as well as academic achievement of students and faculty.

The college runs four undergraduate courses in engineering and one postgraduate courses in Civil Engineering, Mechanical Engineering, Computer science and Engineering, Electronics and Telecommunication Engineering and Master of Business Administration. The vision of the Institute is "Nation building by creating opportunities for rural and urban students through excellence in Education and Research in the field of Engineering and Management ". The college offers excellent opportunity to pursue technical courses. keeping the trend to garner the knowledge of advancement in technical field we organised events like seminar, workshops, expert lectures , etc. form last year college has started the Inspire series for the students. We have sincerely moved into see that the conference would offer best opportunity for engineering and management fraternity.

I express gratitude to experts, keynote speakers for their valuable contribution, authors of papers, delegates, for sharing their experiences and our invites for participating in the conference.

I express my gratitude to Management, D.I.E.M.S, Aurangabad and Institute for Engineering Research and Publication (IFERP).

**Dr. U.D. Shiurkar**

# *Convener Message*

**Prof. Shaikh Mohd Zubair,**
Assistant Professor,
Department of Civil Engineering,
D.I.E.M.S, Aurangabad.

## MESSAGE

Aiming to learn about the latest development and situation in all aspects of Engineering and Management and to understand the advent of new technologies in it, Two days "**International Conference on Technological Innovation in Engineering and Management" (ICTIEM-2018)** is being organised by Deogiri Institute of Engineering and Management Studies, Aurangabad on 26th and 27th February 2018 at D.I.E.M.S. Aurangabad, in association with Institute for Engineering Research and Publication (IFERP).

The aim of conference is to provide an opportunity for exchanging technological advancement and scientific research in the Engineering and Management and bring Engineers, Researchers, Academician, Scientist, Practicing Engineers, Policy Makers in Management, Industrialist on a single platform for the brainstorming of the fruitful experiences and ideas.

The paper presented in these proceedings are the product of Researchers, Academician ,Scientist, Practicing Engineers, Policy Makers in Management and Industrialist and they have been organized from different streams of engineering and management. The seminar proceeding along with CD contains the technical papers from Researchers, Academician, Industrialist, students etc. the conference has good opportunity for the participants coming from different places of India to present and discuss topics in their respective research area.

I would like to thank all the participants for their contribution to the conference proceedings. Behind the success of the whole work, I cannot forget the unconditional support of all the HOD, faculty members, committee members of D.I.E.M.S and IFERP.

My special thanks to my Director, he has given me a chance to work and become a part of this conference. It is our pleasant duty to acknowledge the support and cooperation from the office bearers of D.I.E.M.S, The Management of D.I.E.M.S, IFERP for the organisation of this conference.

**Prof. Shaikh Mohd Zubair**

ICTIEM-18

*International Conference on*
*Technological Innovations*
*in*
*Engineering and Management*

# Keynote Speakers

**Manojsingh Chouhan,**
Head Business Development
2020 Imaging- Smart City Operation Platform

## MESSAGE:

It gives me pleasure to know that ***Deogiri Institute of Engineering and Management Studies, Aurangabad, Maharashtra***, and IFERP is organizing the ***"International Conference on Technological Innovations in Engineering and Management (ICTIEM-18)"*** will be held on 26-27 February, 2018.

I am sure that the interaction of Engineers from the Industry and Academic Institution will go a long way in knowledge sharing to help engineering students to grow and compete globally. The conference will provide a plat form for exchanging ideas and create networks to developed R&D.

I convey my warm greetings & best wishes to all the participants and a great success.

## BIOGRAPHY

Worked in India, Middle East and the UK for 20 + years in business development and Operations Management, Market Intelligence and Strategic Alliances. Experience in devising GTM strategies, International Business development, Budgeting, Forecasting & Planning, Key Account Acquisition and Retention, Cross- Functional Leadership, Customised solutions for Smart City, Safe City, Data Centres, Hospitality, Critical Infra, BFSI, Healthcare, Manufacturing, Real Estate, Oil & Gas, Utility verticals.

- M.Sc. in Applied Electronics with Distinction - 1st Merit holder from Amravati University, India
- M.B.A (PGDBA) - Operations Management from Symbiosis, Pune India
- Business Strategy- Stonebridge Associated Colleges, Cornwall, UK
- Worked in India, Middle East and the UK for 20 + years

***Companies worked:***

- 2020Imaging India Limited for Middle East Market
- Wavestore Limited UK for India and Middle East Market
- Mantech Computers Bahrain
- Mercury Engineering for Oman and Bahrain Market
- Honeywell for Oman and Bahrain Market
- SECOM for Oman Market
- Zicom Electronic Security System India

***Independent roles:***

➢Vice Presidentfor India and Middle East: for a Software Development company

➢Vice President for Armenia, Lebanon and UAE for a Security system company

➢Managing Partnerfor India: For a product company

Website: www.cwprs.gov.in
E-mail: vivek.cwprs@gmail.com

Phone: +91 20 2410 3367
Fax: +91 20 2438 1004

***Central Water and Power Research Station***
Ministry of Water Resources, River Development and Ganga Rejuvenation
PO Khadakwasla Research Station, Pune 411024, Maharashtra, India

**N. VIVEKANANDAN**
M.Sc. (Maths), M.Phil. (Maths), M.E. (Hydrology), M.B.A. (Human Resources), M.A. (Public Administration), M.A. (Sociology), PGDCA, PGDOR, PGDSBSA, PGDSMA, PGDPM&IR, PGDH
Scientist

## MESSAGE

I am very delighted to note that ***Institute for Engineering Research and Publications (IFERP)*** jointly with ***Deogiri Institute of Engineering and Management Studies (DIEMS)***, is organising ***International Conference on 'Technological Innovations in Engineering and Management (ICTIEM-2018***)' at Aurangabad during ***26th and 27th February, 2018.***

I feel that this conference will provide a platform to exchange new and innovative ideas to develop curiosity of science, engineering technology and management. Simultaneously, the outcomes of this conference will definitely lead to viable solutions paving path for technological innovations mission for transforming India. On this occasion, I would like to extend my wishes to the participants, organisers (IFERP and DIEMS) and committee members for this academic endeavour aiming to ensure advancement of technological innovations in science, engineering and management. I wish the ICTIEM-2018 conference a grand success.

N. Vivekanandan

# ICTIEM-18

# *International Conference on Technological Innovations in Engineering and Management*

*Aurangabad, Maharashtra, February 26th - 27th, 2018*

## Organizing Committee

### *Chief Patron*

**Shri Satish B. Chavan,**
Secretary
M.S.P. Mandal, Aurangabad

### *All Patron's*

**Shri Prakash S. Solanke,**
President
M.S.P. Mandal, Aurangabad

**Shri Vivek D. Bhonsle,**
Executive Council Member
M.S.P. Mandal, Aurangabad

**Dr. Ulhas D. Shiurkar,**
Director
D.I.E.M.S. Auranagabd

**Dr. V.G.Gaikar,**
Vice Chancellor
Dr.B.A.T.U, Lonere

### *Convener*

**M.Z.Shaikh,**
Assistant Professor - Civil
Deogiri College, Aurangabad

### *Conference Chair*

**P.M.Soni,**
Assistant professor,
E&TC department

### *Program Chair*

**Dr.S.L. Dhondge,**
HOD first Year Engineering Dept

**Dr. G.R.Gandhe,**
HOD Civil Engineering Dep

**Dr. R.M. Autee,**
HOD E&TC Engineering Dept

**Prof. P.G. Taur,**
HOD Mechanical Engineering Dept

**Prof. S.B. Kalyankar,**
HOD CSE Dept

**Prof. R.G.Rebba,**
HOD MBA

### *Organising Committee*

**Priyanka Dhas,**
Asst Professor,
D.I.E.M.S. Auranagabd

**Rushina Khan,**
Asst Professor,
D.I.E.M.S. Auranagabd.

**Yogesh Mangulkar,**
Asst Professor,
D.I.E.M.S. Auranagabd

**Dr. D.B. Magar,**
Assistant professor, FE department,

# International Advisory Committee

# CONTENTS

# CONTENTS

# CONTENTS

# CONTENTS

# CONTENTS

# CONTENTS

# CONTENTS

# CONTENTS

# CONTENTS

# CONTENTS

# CONTENTS

# CONTENTS

# CONTENTS

# CONTENTS

ICETIME - 18

# International Conference on Technological Innovations in Engineering and Management

**Aurangabad,Maharashtra**
**26th – 27th February, 2018**

# ABSTRACTS

**ICETIME – 18**

**Organized by**

**Deogiri Institute of Engineering and Management Studies, Aurangabad**
**and**
**Institute For Engineering Research and Publication (IFERP)**

*International Conference on Technological Innovations in Engineering and Management*

*Aurangabad, Maharashtra, 26th & 27th, February 2018*

# A Lab view Based power analysis of solar tracking system and its implementation in real time

**Poonam Soni.,** , PG Student, Dept of E&TC, Deogiri Engineering College Aurangabad.
**Aayuti Betude.,** Assistant Professor, Dept of E&TC, Deogiri Engineering College Aurangabad.

***Abstract:--***

Sun is very important part of our life and hence Sun is become very abundant source of power. Even so, only a fraction of the entire energy is harnessed and that too not efficiently. The world population is increasing day by day and the demand for energy is increasing accordingly. Since oil and coal are getting depleted and it cannot be replenished, we opt for an alternative source of energy. Renewable energy is derived from natural processes that are replenished constantly. Renewable energies are inexhaustible and clean. The energy comes from natural resources such as sun, wind, tides, waves, and geothermal heat. Solar energy is quite simply the energy produced directly by the sun. This project aims at the development of a simple process to track the sun and attain maximum efficiency using Microcontroller and Lab VIEW for real time monitoring.

**26th -27th February 2018** **ICTIEM – 18** **ISBN: 978-81-932966-8-4**

***Organized by:***
**Deogiri Institute of Engineering and Management Studies**
***And***
**Institute For Engineering Research and Publication (IFERP)**

# Biometrics Based Bus Ticketing System

**B.Abishek.,** student, Dept. of ECE, Sri Sairam Institute Of Technology, Chennai

***Abstract:--***

Over the last few decades, there has been an increase in the use of public transport. This increase in the use of public transport has made the ticket vending and managing the public in a bus, a very complex task. This increase has also increased the paper usage by a large quantity. To overcome this complex task, we have come up with the solution of using the fingerprint of the user to book the tickets upon boarding the bus. This system is highly secured as forgery cannot be made with respect to biometrics. The fingerprints of the user are stored in a database. Upon the time of boarding and exiting the bus, the fingerprint of the user is scanned. The odometer reading of the bus is then stored against the value of the scanned fingerprint during both the time of boarding and exiting the bus. The distance travelled by the user is then calculated and the corresponding amount of money is deducted automatically from the PTS wallet. The user is also subjected via the IR transmitter and receiver led's after their fingerprint being scanned, so as to not make the user board and exit the bus via different gates and also to not get cheated by the user. Those people whose hand gets most used due to their work and the children of age below 15 will be provided with smartcards that can be used in place of fingerprints. The fingerprints that fail to get read by the system due to some reasons for more than two(2) attempts, smartcard may be used. This proposed idea will also have another additional feature that if a passenger stands as an obstacle to the IR led's that are placed both at the entry and exit points, a buzzer rings inside the bus until the obstacle is removed. Thus, this project brings in cent percent accuracy with respect to amount of money deducted and also the process is completely automated. There will be a large downfall in the usage of paper and the process of public management becomes simpler. There is also a reduction in the accidents that is caused by the footboard travel with the help of the buzzer.

***Keyterms:--***

Biometrics, PTS(Public Transportation System), IR led's, odometer, buzzer, fingerprints, database.

# Solar Based Agricultural Pumping Using Dc Pump

**Prof. Pravin Magdum.,** Assistant Professor, Electrical department, Sanjay Ghodawat Group of Institutes, Kolhapur
**Aditi Jadhav.,** Student',Electrical Department, Sanjay Ghodawat Group of Institutes, Kolhapur.
**Suraj Hongekar.,** Student',Electrical Department, Sanjay Ghodawat Group of Institutes, Kolhapur.
**Sabjani Kadam.,** Student',Electrical Department, Sanjay Ghodawat Group of Institutes, Kolhapur.
**Kiran Lengare.,** Student',Electrical Department, Sanjay Ghodawat Group of Institutes, Kolhapur.
**Rajiv Patil.,** Student',Electrical Department, Sanjay Ghodawat Group of Institutes, Kolhapur.

***Abstract:--***

Now a days, in our country diesel based pump and non-renewable sources are used for agriculture pumping application. Which having certain disadvantages like cost,pollution efficiency to overcome that solar energy is based alternative for agriculture pumping.The main objective of this project is to study literature review of pumping technology.Current state of solar pumping technology, factor affecting of solar pumping and how solar water pumping system works. Solar water pumping system mainly consists of two component. One is a PV Panel and another one is pump. When solar panel exposed to sunlight DC current is produces. This current is given to DC pump and it pumps the water with getting good efficiency and less maintenance.

***Keywords:--***

DC-Direct Current ,PV-Photovoltaic.

# Greenhouse Parameter Monitoring & Controlling Using Gsm

**Pallavi V. Yadav.,** Department of Electronics And Telecommunication Engineering, Karmayogi Engineering College, shelve, Pandharpur.

**Komal L. Sonwane**., Department of Electronics And Telecommunication Engineering, Karmayogi Engineering College, shelve, Pandharpur.

**Nishigandha B. Magar.,** Department of Electronics And Telecommunication Engineering, Karmayogi Engineering College, shelve, Pandharpur.

**Aishwarya B. Gund**., Department of Electronics And Telecommunication Engineering, Karmayogi Engineering College, shelve, Pandharpur.

**Yogesh S. Ghodake.,** Prof, Department of Electronics And Telecommunication Engineering, Karmayogi Engineering College, shelve, Pandharpur.

***Abstract:--***

Greenhouse monitoring is a needed one for Variable climate changes. GSM technologies have been rapidly developing wireless technology during few years. Starting from industrial controls and telecommunications, it is now being applied in environmental applied in environmental monitoring and agriculture. The existing system has the ability to yet lack the ability to control indoor humidity and other parameter. This project is used to measure various parameters like temperature, humidity, and light and soil moisture. Values of these sensors are displayed on a LCD. These parameters are sensed by sensors and sensor output is applied and given to ADC. Microcontroller controls these parameters and keeps them at some predefined values using relay interface. At the same time these current values of all parameters are sent through SMS using a GSM modem.

***Keywords:--***

Green House, Keil Software, GSM, Wireless sensor network, Microcontroller.

# Quality Education System for Orphanage Children

**Ajay kokate.,** Department of Information Technology, Pimpri Chinchwad College of Engineering, Pune,Maharashtra.
**Prasad Kamlaskar.,** Department of Information Technology, Pimpri Chinchwad College of Engineering, Pune,Maharashtra.
**Dinesh Nikam.,** Department of Information Technology, Pimpri Chinchwad College of Engineering, Pune,Maharashtra.
**Ms.Rohini Pise.,** Department of Information Technology, Pimpri Chinchwad College of Engineering, Pune,Maharashtra.

***Abstract:--***
Orphan children are one of the important parts of society and cannot be neglected, after turning 16 of their age, orphans are sent out of the orphanages, from which 40become homeless,35% become criminals due to lack of education,5% of them attempt suicide,20% of them do something in life for their survival. Our thesis is mainly focusing on development of orphanage children and provide ways for them to survive and become successful in life. We will create and keep track of their profiles according to which suitable jobs will be recommended to them. We will also provide online parenting, donation platform, job opportunities, scholarships etc. to all of the orphans. The profiles will be maintained by the mentors or authorities of the orphanage so that the data and personal characteristics will be authentic and verified. This will help in job recommendation system, also depended on their skills some scholarships can also be provided to the children, the donations done by donors can also be used for higher studies. Our thesis will help to connect old age homes and orphanages so that the system will be supportive for development of both.

***Keywords:--***
Orphan,On-line parenting,Profile,Mentor

# CFD analysis of bubble hydrodynamics in a steam reactor for hydrogen production chemical looping reforming system

**Akash Chavda.,** Marwadi Education Foundation Group of Institutions, Rajkot, Gujarat, India.
**Atal Harichandan.,** Marwadi Education Foundation Group of Institutions, Rajkot, Gujarat, India.

***Abstract:--***
Three reactor chemical looping reforming system is used for hydrogen production by capturing the harmful gases like $CO_2$, $NO_x$ and $SO_x$ using metal oxide as an oxygen carrier and steam. We investigates the bubble hydrodynamics and flow physics by the use of Ansys FLUENT which is based on finite volume approach. The numerical model of steam reactor is also developed to understand chemical kinetics between gas-solid phases based on kinetic theory of granular flow. An Eulerian multiphase model has been used to describe the continuum principle of two fluid model for both gas and solid phase. In the present work, steam and iron oxide is used as fuel and oxygen carrier respectively. The numerical results are validated with the experimental and numerical results available in open literature. The simulation are found to capture the bubble hydrodynamics in terms of bubble generation, rise, growth and rapture in the unsteady and steady-states in better manner. Numerical simulations are carried out to capture the bubble hydrodynamics and the relationship between molar fraction of products and gas phase and bubble formation. Solid volume fraction contour are used to understand the better flow physics and chemical kinetics.

***Keywords ::--***
CFD simulation, chemical looping reforming, $CO_2$ capture, hydrogen production, steam reactor, Eulerian multiphase model.

# Non Linear Analysis of Off Shore Structures

**Akhil Bhandari.,** Student, D. I. E. M. S, Aurangabad.
**R. S. Patil.,** Assistant Professor, D. I. E. M. S, Aurangabad.
**Dr. G. R. Gandhe.,** Head of Dept.,D. I. E. M. S, Aurangabad.

***Abstract:--***

Performance-based design requires consideration of environmental conditions at recurrence periods well beyond those of current practice, when structural damage is expected and connections are likely to behave in-elastically. Performance-based design considers both the occurrence and consequence of structural damage caused by extreme conditions and could improve the performance of offshore structures. This paper assesses the post-elastic behavior and ductility of common connection details for offshore jacket structures based on a survey of experiments and empirical joint models and on nonlinear finite element analyses. The assessment includes common connection detail sunder tension, compression, and bending. The prediction of the inelastic load-deformation response, based on MSL and API, two empirical joint models in the structural analysis program, USFOS, is compared to experiments. As an illustrative example to demonstrate the performance assessment capabilities of this approach, a pushover analysis is carried out for an offshore jacket structure supporting a wind turbine and subjected to extreme wind and wave loading

***Key words:--***

sap 2000, Non linear analysis, Off-shore structure.

# Hybrid Power Generation Using Maglev Turbine

**Sagar D. Ghagare.,** Asst. Prof, Department of Mechanical Engineering, SSIET, Ghogaon, Maharashtra, India
**Abhijeet S. Suryawanshi.,** Asst. Prof, Department of Mechanical Engineering, DACOE, Karad, Maharashtra, India
**Anant D. Awasare.,** Asst. Prof, Department of Mechanical Engineering, DACOE, Karad, Maharashtra, India
**Dr. Abhijit M. Zende.,** TProfessor and Head, Department of Civil Engineering, DACOE, Karad, Maharashtra, India
**Hanmant M. Kumbhar.,** Vice Principal, DACOE, Karad, Maharashtra, India.
**Vahid M. Jamadar .,** Asst. Prof, Department of Mechanical Engineering, DACOE, Karad, Maharashtra, India

***Abstract:--***

Nowadays the demand for electricity is increasing and traditional power generations sources has not able to complete this demand. This paper presented different configuration of wind turbine for power generation. Power is generated using an axial flux generator with use of permanent magnets, set of coils and solar cell. A mini model of maglev turbine has made to perform the work of the turbine and this turbine is connected with the solar cells to generate power generation. The aim of this work is to design and implement a magnetically levitated wind turbine system that has the ability to operate in all mediums wind speed conditions and solar energy. Maglev turbine has several advantages over conventional wind turbine and has certain applications. Hence the efficient use of wind power and solar power is possible using this model to generate high power generation.

***Ker Words:--***

Solar Energy, Magnetic Levitation, Maglev Wind Turbine .

# Thermal analysis of plate by using finite element analysis

**Anjali Joshi.,** PG Student, Department of civil Engineering, Deogiri Institute of engineering & management, Aurangabad, India.
**Gajendra Gandhe.,**Proffesor & Head of the Civil department, Deogiri Institute of engineering & management, Aurangabad, India

***Abstract:--***

In this paper two-dimensional isotropic square plate is used to investigate thermal behavior of plate subjected to thermal loading. In this analysis two different materials are used and obtained results are compared with each other. For finite element method formulation ANSYS package is used. In analysis one boundary condition is used. Results are related to structural properties like deflection, stresses. Steady state thermal analysis and static structural analysis performed in this study.

# Effects of Functionally Graded Adhesive on Failures of Double Lap Joint Made of Laminated FRP Composites

**Ankit A. Sawant,** PG Student, Department of Mechanical Engineering, Defence Institute of Advanced Technology (Deemed University), Pune.

**S.V. Nimje.,** Asst. Professor, Department of Mechanical Engineering, Defence Institute of Advanced Technology (Deemed University), Pune

***Abstract:--***

The demand of modern industries to use lightweight assemblies have promoted the use of composite materials. Using traditional joining methods to assemble these materials leads to introduction of stress concentrations which reduce the strength of the assembly. Adhesive bonding technique is used to overcome this limitation. Stress analysis carried out on double lap joint by previous researchers using mono adhesive layer indicates stress concentrations at the ends of the overlap. The present research is done in the view of reducing the stress concentration at the ends and thus increasing the joint strength. The greater adhesive shear strains at the overlap edges necessitates the use of more ductile adhesive at the edges and less ductile adhesive in the middle. This has been achieved by grading the adhesive layer from stiff in the middle to ductile at the ends using smooth and continuous gradation profiles. Three dimensional finite element analysis is carried out on the double lap joint and the stresses at the various interfacial surfaces have been determined. The onset of failure has been predicted using Tsai-Wu coupled stress failure criterion. The critical location have been found to be present between the main adherend and adhesive layer. The successive numerical simulations carried out using various modulus ratio indicates considerable reduction in failure index at the critical locations. The results indicates increase in joint strength using functionally graded adhesive than using mono adhesive layer.

***Keywords:--***

double lap joint, FRP composite, functionally graded adhesive, failure analysis

# Enabling Storage Auditing In Cloud of Key Updates from Verifiable Outsource

**Arjumand Fatima.,** PG student, Dept of cse, P.E.S. College Of Engineering, Auranagbad.

***Abstract:--***

Key-introduction resistances have dependably be a critical issue for inside and out digital barrier in numerous security applications. Recently, how to manage the key presentation issue in the settings of distributed storage evaluating have been proposed and considered. To address the test, existing arrangements all require the customer to redesign his mystery keys in each day and age, which can definitely get new nearby, weights to the customer, particularly those with constrained calculation resources, for example, cell telephones. In this record, it concentrate on the most proficient method to make the key overhauls as straightforward as could be allowed intended for the customer and propose another worldview called distributed storage review with certain outsourcing of key redesigns. In this worldview, sort overhauls can be securely outsourced to some approved gathering, and consequently the key-redesign trouble on the customer will be kept negligible. Specifically, it influence the outsider inspector (TPA) in numerous current open evaluating plans, let it assume the part of definitive gathering for our situation, and make it accountable for both the capacity review with the safe key redesigns for key-presentation resistance. In our drawing, TPA just needs to hold a scrambled rendition of the customers mystery answer while doing all these oppressive errands going for the benefit of the customer. The customer just needs to download the encoded mystery answer from the TPA while transferring new documents to cloud. Additionally, our configuration likewise furnishes the customer with capacity to encourage accept the legitimacy of the encoded mystery keys gave by the TPA. All these critical components are painstakingly intended to make the entire examining system through key presentation resistance as straightforward like feasible for the customer. It formalizes the definition and the assurance model of this worldview. The security verification and the execution reproduction demonstrate that our itemized plan instantiations are secure and proficient.

# Modeling, Analysis and Manufacturing of Belt Conveyor Roller Shaft

**Mrs. Ashvini Sukhdeo More.,** PG Student, Department Of Mechanical Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad.

**Prof.P.V.Jawale.,** Assistant professor, Department Of Mechanical Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad.

***Abstract:--***

In belt conveyor roller shaft system there is the problem i.e. shaft breakage and wear problem. Due to this problem shaft will breakage after every 2 months. To overcome this problem done the Material selection study and process to modeling, analysis and manufacture efficient shaft for the conveyor system. For the design purpose of the shaft CREO-2015 used and FEA analysis is done in ANSYS R-18.1 software .While doing analysis compared the MS bright material shaft with EN 24 material shaft. EN24 having efficient mechanical properties than mild steel and other material properties like, hardness, tensile strength and availability. Analytical results and software (ANSYS) results shows that, the maximum deflection of the EN 24 is always lower than the bright M S. The experimental setup of project and taking the trials for EN24 material shaft. For the same load EN24 shaft will be durable for long life as compared MS bright shaft. By taking the experimental trials on EN24 material shaft achieve more strength and more life i.e.50-55 days as compared to Ms Bright shaft of same size.Cost of maintenance and replacing of the shaft is saved.

***Keywords:--***

ANSYS R-18.1, CREO-2015, EN 24 material, Experimental results, FEA analysis.

# A Review on Different Methods of Dairy Wastewater Treatment

**A. S. Tompe.,** M. Tech Student, Walchand College of Engineering, Sangli.
**Mr.C.H.Wagh.,** Associate Professor, Walchand College of Engineering, Sangli.

***Abstract:--***

One of the major sound ways of saving water is treatment of wastewater from different industries and its reuse. Out of that Dairy industry is major wastewater generator and water consumer as well. The dairy industry involve the processing of raw milk into various products like milk and milk powder, butter, cheese, ghee, yogurt etc. by using processes pasteurization, packaging filing in cans which enhances the life of dairy products. Characterization of dairy waste stream is done with high concentrations of suspended solids, high biological oxygen demand (BOD) and chemical oxygen demand (COD), high nitrogen concentrations, high suspended oil and grease contents, and large variations in pH which requires special and concrete method of treatment. Generation of dairy wastewater is 1 to 3 times the volume of milk processed so to promote sustainability reuse of dairy wastewater is necessary after the proper way of treatment. The conventional methods were used to treat dairy wastewater such as Physico-chemical and biological treatment but widely biological treatment are used which are aerobic and anaerobic treatment. Conventional methods are proven to be less effective than the advanced methods because of high area requirement, problem of high maintenance cost, labor cost and also disposal problem of sludge. The present paper is a review on the several methods and their performance evaluation comparison of dairy wastewater on the basis of evaluated parameters. Primary objective of this study is to find out more effective way of treatment using comparison.

***Keywords: -***

Dairy wastewater, Conventional method, advanced method, BOD and COD.

# Authorized De-duplication Of Data Over Cloud.

**Shaikh Basirat Tazin**., M.E. Student, CSE Department, PES College of Engineering, Aurangabad, India.
**Professor S.D Pingle.**, Ass.Professor, CSE Department, PES College of Engineering, Aurangabad, India.

***Abstract:--***

With large number of users migrating towards cloud storage for storing their important data, data compression technique managing data stored over cloud had gained much importance. This technique removes duplicate copies of same data on a server and keeps only one copy. Again to protect data from attackers, data is encrypted using linear congruentiality algorithm which employs convergent encryption concept. Authorized duplicate check is performed by users after encryption of data with help of generated tags. File is uploaded if it is not already present otherwise POW is implemented. Hybrid cloud architecture is used with public and private cloud, where public cloud stores all unique copies of data and private cloud manages authenticated access by maintaining privileges associated with file and users.

***Keywords:--***

Data de-duplication, convergent encryption, authorized duplicate check, hybrid cloud.

# Numerical Simulation of Updraft Gasifier in Ceramic Industry under Different Values of Equivalence Ratios

**Bhargav Manek**., Department of Mechanical Engineering,Marwadi Education Foundation Group of Institutions, Rajkot
**Hardik Ramani.**, Department of Mechanical Engineering,Marwadi Education Foundation Group of Institutions, Rajkot

***Abstract:--***

Energy is the vital requirement for any industry and due to more industrialization its demand is increasing highly. Coal is one of the major fuel sources for power and process heating. Direct combustion of coal is one of the main reasons of pollution. Coal gasification is a Non-Conventional technology to produce heat in economical way by generating product of carbon monoxide and hydrogen gas called synthesis gas. In the present study, numerical simulation of updraft gasifier with coal as fuel has been performed. Euler-Lagrange approach is used to describe gasification process. The present numerical study is carried out based on the gasifier used for industrial purposes manufactured by Radhe Renewable Energy Pvt. Ltd. situated in Rajkot, Gujarat. ANSYS Fluent V 17.2 has been used for the CFD simulations. The operating parameters for the present simulation were taken from ceramic industry situated in Morbi, Gujarat. Validation of numerical work was done with experimental data that shows good agreement. Effect of equivalence ratio (E.R.) is studied on the output syngas. Results show that industry is working with E.R. value 0.295 and optimized E.R. value is 0.32 in present study. By increasing E.R. value we found that syngas component fraction is decreasing.

***Keywords:--***

CFD; Gasification; Updraft gasifier; Equivalence ratio; Ceramic application

# Wave Drag Reduction in Cascade Fins in Supersonic Regime

**C Dinesh Prabhu.,** M.Tech Scholar, Department of Aerospace Engineering, DIAT (DU), Ministry of Defence, Pune, India

**Sudharsan B.,** M.Tech Scholar, Department of Aerospace Engineering, DIAT (DU), Ministry of Defence, Pune, India.

**Ajay Misra.,** Head of the Department, Depart
ment of Aerospace Engineering, DIAT (DU), Ministry of Defence, Pune, India.

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

***Abstract:--***

The endeavor to improve the aerodynamic efficiency of supersonic flying bodies has been constant and significant ever since. Notably it has a significant contribution towards the growth of Aerospace industry. The rigorous experiments carried out on aerodynamic efficiency have led to the optimization of flying body design involving structural, aerodynamic or chemical performance parameters. Aerodynamic efficiency is the basis of energy-efficient flying model, and low drag is the basis of aerodynamic efficiency. The relative impact of drag depends upon the flight regime and specific design requirements. Hence, in the search of improving the aerodynamic efficiency and reducing the undesirable flight properties, specifically in supersonic regime, a channelised study has been carried out, as also being carried out many researchers across the world through different processes. Since shock waves create a considerable amount of drag, which can result in extreme drag on the supersonic body, it forms a significant area of study while aiming at improving the aerodynamic efficiency of a supersonic flying object. Hence, this paper deals with the reduction of wave drag by adopting cascade fin, which is a kind of fin that is still evolving in the aerospace environment. A cascade is a control surface which is composed of an external frame supporting an internal cascade of planar surfaces having small chord length. Various properties of cascade fin impact the aerodynamic efficiency individually and also in consonance with other properties. However specific properties of angle of attack and leading edge shape of cascade fin have been considered in this paper to evaluate their effect in reducing the wave drag of a supersonic flying object. This paper deals with these properties of cascade fin individually in isolation, in order to study and understand their impact in detail. The study on wave drag reduction by varying the angle of attack 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 00 and 50. 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 00. 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.

***Keywords:--***

Cascade fin, Leading edge, Supersonic, Wave drag

# Solar Powered Electrocoagulation: A Review

**C. J. Nawarkar.,** M. Tech Student, Walchand College of Engineering, Sangli.
**Dr. V. D. Salkar.,** Associate Professor, Walchand College of Engineering, Sangli.

***Abstract:--***

Today's major challenge is to plan for sustainable use of water resource. Bourgeoning population and industrialization, as well as changing life styles call for more and more water. Ironically, rivers, canals and other water-bodies are being constantly polluted due to indiscriminate discharge of industrial effluents as well as other anthropogenic activities and natural processes. So, it is now not only obligatory to control the water pollution through physicochemical treatments but to implement recycling also. Further, in recent years, new processes for efficient and adequate treatment of various wastewaters with relatively low costs are needed due to continually upgrading environmental regulations. In this view, Electrocoagulation (EC) has been proposed by several researchers as an effective method for the treatment of various types of water and wastewater. At this point, the EC process has attracted a great deal of attention in treating various wastewaters because of its versatility and environmental compatibility. The EC process has many advantages such as simple equipment, easy operation, a shortened reactive retention time, no chemical additions, and decreased amount of sludge, which sediments rapidly. Though, EC is dependable technique for treatment the power requirement is a major concern. Solar energy from photovoltaic (PV) panel is the ideal source of energy to overcome this problem. Studies have been done successfully for solar powered EC system to treat the water and wastewater. The environmental impact induced by the use of solar energy is minimal and this renders the solar powered EC process environmentally attractive. This review focuses on various studies those have been dedicated to utilize solar powered electrocoagulation for water and wastewater treatment. This review attempts to highlight the main achievements in the area and outline the advantages of solar powered EC process to broaden its range of application.

***Index Terms:--***

Electrocoagulation, Solar energy, Water and Wastewater treatment, Photovoltaic panel

# Failure Analysis of Functionally Graded Adhesively Bonded Tubular Joint under Combination of Axial and Torsional Load

**Davinder Kumar.,** PG Student, Department of Mechanical Engineering, Defence Institute of Advanced Technology (DU), Pune-411025, India.

**S.V. Nimje.,** Asst. Professor, Department of Mechanical Engineering, Defence Institute of Advanced Technology (DU), Pune-411025, India.

***Abstract:--***

This research deals with finite element based simulation of a functionally graded adhesively bonded tubular joint under combined axial and torsional loading. The tubes are made of Gr/E (T300/934) laminated FRP composites. The research carried out in past indicate high stress concentration at both ends of overlap. By employing a modulus graded adhesive along bond line the stress concentration at the ends of overlap can be reduced. This will result in significant increase of strength and lifespan of adhesively bonded joint. The material gradation of the adhesive along the bond line is achieved by suitable smooth and continuous function profiles with varied modulus ratios. The out-of-plane shear stress and peel stress values have been calculated along the interfacial surfaces of bond line of the tubular joint. Failure indices have been calculated by using Tsai-Wu coupled stress criterion to predict the failures onset location The critical location have been identified to be between the outer tube and adhesive layer near the loaded end. Results shows significant reduction in the value of failure index at the critical location thus increasing the joint strength and delayed failure onset location with functionally graded adhesive.

***Keywords :—***

Functionally Graded Adhesive, FRP Composite Tubes, Failure Analysis, Combined Loading.

# Obstacle Avoidance in Cable Driven Parallel Robot

**Deveshkumar Kanzariya.,** Department of Mechanical Engineering, Marwadi Education Foundation, Rajkot, Gujarat, India
**Nikhil Chotai.,** Department of Mechanical Engineering, Marwadi Education Foundation, Rajkot, Gujarat, India

***Abstract:--***

In this paper, obstacle avoidance algorithm for four cables driven parallel robot is proposed considering the industrial environment where it can be used as pick and place operation. The four cables have been used to move the end effector in working space. The movement of the end effector is achieved by winding and unwinding the cables with help of Stepper motors in our case. Keeping positive tension in cables, Cable driven parallel robot moves straight in the direction of goal point or final destination until the obstacle detected in the path. Sensors are used to detect obstacle in the path. With the help of algorithm it avoids the obstacle and continues the straight line movement to goal afterwards. The path of end effector is considered for jerk free smooth motion. Algorithm presented in this paper ensures collision free path for Cable driven parallel robot when path exists. This algorithm further can be extended for industrial cranes and quad copters.

***Keywords:--***

Collision avoidance algorithm, obstacle avoidance, parallel wire robot, Wire driven robot

*International Conference on Technological Innovations in Engineering and Management*

*Aurangabad, Maharashtra, 26th & 27th, February 2018*

# Numerical Evaluation and Study of Effects of Mine Blast on V-hull of Wheeled Combat Vehicle

**D R Makwana.,** Vehicles Research & Development Establishment (VRDE), Ahmednagar.
**Dr D G Thakur.,** Defence Institute of Advanced Technology (DU), Pune
**K Senthilkumar.,** Vehicles Research & Development Establishment (VRDE), Ahmednagar.
**Vikas Kangude.,** Cresttek Engineering Solutions Pvt Ltd, Pune
**B.S. Patil.,** Defence Institute of Advanced Technology (DU), Pune

***Abstract:--***

The purpose of special kind of vehicle hull design is to increase the vehicle and crew survivability by deflecting an blast wave away from the vehicle due to a mine blast. The vehicle blast simulation has been widely used to predict the damage caused due to blast to the vehicle structure and occupants. This paper highlights the simulation and analysis carried out on the V-shaped hull bottom of a wheeled combat vehicle. Numerical analysis revealed that there is significant energy absorption because of the use of deformable V-plate for vehicle hull. The simulation results revealed the area of design focus. This paper presents the results of a simulation performed with LS-DYNA using 8kg TNT under the belly of a wheeled combat vehicle. Local deformation, peak acceleration, von-Mises stress values and peak pressure values were obtained and analysed as results of analysis.

***Keywords:--***

Blast protection, Simulation of Armoured Vehicles, Mine blast

# Steganography Techniques: A Survey

**Mr. Dipak U. Chaudhari.,** M.E. (E&Tc), Late G.N. Sapkal, C.O.E.,Nashik, Maharashtra, India
**Dr. Sahebrao B. Baga.,** Principal, Late G.N. Sapkal, C.O.E., Nashik, Maharashtra, India

***Abstract:--***

Steganography means the study of invisible communication. In Steganography usually hide the existence of the communicated data in such a way that it remains confidential & it maintains secrecy between two communicating parties. Data hiding techniques have crucial role with the rapid growth of secret communications & intensive transfer of multimedia content. The art of hiding information in ways that prevent detection is used in Steganography. Secrecy is achieved by embedding data into cover image and generating a stego-image, in image Steganography. Different types of steganography techniques are present & each have their strengths and weaknesses. In this paper, we review the different data hiding & security techniques that are used to implement a steganography.

***Keywords:--***

DCT , Frequency Domain, LSB method, PSNR, Steganography

# Comparative Study of Efficient Neural Network Methodology for Text & Image Based Spam Email Filteration

**Ms. Dipalee Patil.,** Student, Department Of Computer science & Engineering, MSS's College of Engineering & Technology, Jalna, Maharashtra, India

**Prof. S. R.Ghungrad.,** Faculty, Department Of Computer science & Engineering, MSS's College of Engineering & Technology, Jalna, Maharashtra, India

***Abstract:--***

Internet users frequently use e-mail for fast data communication of audio, video and textual data but at the same time they are facing problem due to unwanted e-m3ail known as spam e-mail. In order to filter this unwanted e-mail, a classifier must be placed in the network or in computer. Spam e-mail with advertisement text embedded in images presents a great challenge to anti-spam filters. In this paper, we present a fast method to detect image-based spam e-mail. To achieve the objective, Artificial Neural Network is applied for the classification of spam and ham emails. OCR-based modules can be used against image spam, to tolerate the analysis of the semantic content embedded into images.

***Keywords:--***

Spam, Ham, Artificial Neural Network, Image Spam, OCR

# A Serve on Multi-keyword Based Search and Privacy Preservation of Distributed Document in the Network

**Ms. Dipeeka P. Radke.,** Assistant Professor, PBCE, Nagpur
**Ms. Shweta Warhadkar.,** Student, PBCE, Nagpur
**Ms. Unnati Kedare.,** Student, PBCE, Nagpur

***Abstract:--***

In information networks, owners can store their documents over distributed multiple servers. It facilitating user to store and access their data in and from multiple servers by sitting anywhere and on any device. It is a very challenging task to provide efficient search on distributed document also provide the privacy on owner's document. The existing system provides one possible solution that is privacy preserving indexing(PPI). In this system, documents are distributed over multiple private server which are collectively controlled by cloud/public server. When user wants some documents, they query to public cloud, which then returns the candidate list that is private server list to user. After getting list, user can search the document on specific private server but in this system, documents are stored in plain text form on private server that is privacy is compromised. But proposed system enhanced this existing system to make it more secure and efficient. First documents are stored in encrypted form on the private server and then use key distribution center(KDC) for allowing decryption of data receive from private server, at client side. The proposed system also implements TF-IDF, which provides the ranking results to users.

**26th -27th February 2018** **ICTIEM – 18** **ISBN: 978-81-932966-8-4**

***Organized by:***
**Deogiri Institute of Engineering and Management Studies**
***And***
**Institute For Engineering Research and Publication (IFERP)**

# Vibration Characteristics of Pongamia Pinnata (karanja) Biodiesel and Its effects on performance of C.I. Engine

**Shrikant Baste.,** PhD scholar, Sardar Patel College of Engineering, Mumbai, INDIA
**S. S.Umale.,** Associate Professor, Sardar Patel College of Engineering, Mumbai, INDIA

***Abstract:--***

Karanja oil is very popular biodiesel used in CI engines in India. Among various biodiesels used, 10%karanja oil is widely used when compared with rest of other biodiesels like Jatropha, Soybean oil. The combustion experiments were conducted in Mahindra 575DI engine, during experiment combustion vibrations are analyzed at different loads in percentage during plowing action. It is found that the vibrations are generated due to combustion of biodiesel at different loads. The biodiesels are used in different blends such as B10, B10, B50 and B100. The changes in vibration level were observed during each load for different blends. The changes in vibrations are compared with diesel oil. The vibration result values observed in diesel oil are more than other blends. It is also observed that by increasing the blending rate the change in vibration value are found decreasing. It is concluded that the performance of CI engines from vibration point of view is improved with biodiesel as compared to diesel.

***Keywords:--***

Biodiesel, Karanja oil, diesel oil, vibration, performance

# Numerical Analysis of a Solar Air Heater for Improved Performance using Turbulators

**Gerriet Stetter.,** Department of Mechanical & Manufacturing Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal.

**K. Vasudeva Karanth.,** Department of Mechanical & Manufacturing Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal.

***Abstract:--***

Solar air heaters are widely used now a days in commercial and industrial applications for space heating and drying purpose. Lot of research has been carried out to improve the performance of solar collectors using different types of turbulators. In this study a typical cylindrical turbulator with ribs has been analyzed for improvement in thermal performance of solar air heater. It is observed from the CFD study that there is a significant improvement in thermal performance for turbulated air heater configuration when compared to plain duct configuration for all the mass flow rates chosen for the study. The presence of cylindrical turbulators improves the Nusselt number by about 20% for flow Reynolds number in the neighborhood of 10000. However, at higher mass flow rate there is only a marginal improvement in Nusselt number. This indicates that there is an optimum mass flow rate for which there is an enhanced performance.

***Keywords:--***

Solar air heater, pressure drop, Nusselt number, Turbulator.

# Six Sigma approach for Reducing the SLA's Resolution time

**Praveen D Malali.,** Sapient Razorfish, Bengaluru, KA 560037 India
**Gopalkrishna B.,** Department of Humanities and Management, Manipal Institute of Technology, MAHE, Manipal, Karnataka, India
**Shiva Prasad H C.,** Department of Humanities and Management, Manipal Institute of Technology, MAHE, Manipal, Karnataka, India

***Abstract:--***

The Six Sigma is the systematic, data-driven methodology for improving processes by reducing waste and defects/errors. The key measure within Six Sigma is the number of defects and identifying the causes for variation. The variations are agile that creates uncertainty in delivering the desired outcome. Service organizations aim to deliver services at a predetermined level officially termed as Service Level Agreements. The worldwide accepted standards are reducing the variation, and the service quality can be improved to attain better service level acceptance. The objective of this study is to identify causes of variations in the project operations. Hence it is necessary to establish specifications that reduce the variation in the project operations. The study shows the deviations among the projects teams. By analysing the time-variation in resolving the problems encountered in different projects, it was found that project has failed to maintain the uniformity regarding delivery concerning service level agreement. Based on the Service Level Agreement and checking the process capability performance between each team using six-sigma and maintaining the time-variations well within the specified limits of process capability indicator thus enhancing the business opportunities.

***Keywords:--***

Process capability, Resolution time, Quality Function Deployment, SLA, Six Sigma, Time-variation.

# Effect of Geometry on Heat Transfer from an Extended Surface of a Counter Flow Heat Exchanger

**Bonu Praneeth.,** Department of Mechanical & Manufacturing Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal – 576 104, India.

**Balam Karthik.,** Department of Mechanical & Manufacturing Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal – 576 104, India.

**N. Yagnesh Sharma.,** Department of Mechanical & Manufacturing Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal – 576 104, India.

***Abstract:--***

Heat exchangers are widely used in variety of applications especially in industry as cooling device. It is a well-known fact that the heat transfer rate can be enhanced by increasing more surface area of the heat exchanger. The effective way of improving surface area is by providing fins on the periphery of heated surface. This paper deals with numerical simulation of counter flow heat exchanger equipped with four longitudinal fins. Two different types of cross-sectional shapes are studied namely rectangular and triangular. The cross sectional area of these fins is maintained constant for all configurations of fin geometry. Simulation is carried out using standard K-ε turbulence model. CFD results indicate that the effectiveness of triangular shaped fin surface is found to be 40% higher than that compared with the base model. It is also found that the pressure drop is very minimum for the configuration with rectangular shaped fin model when compared with base model configuration.

***Index terms:--***

Effectiveness, pressure drop, Nusselt number, Turbulence.

# Electrocoagulation of Wastewater from Agro -based Industries: A Review

**G. S. Bhosale.,** M. Tech Student, Walchand College of Engineering, Sangli.
**Dr. V. D. Salkar.,** Associate Professor, Walchand College of Engineering, Sangli.

***Abstract:--***

In India, there are many agro based industries such as sugar, distillery, textile, dairy etc. Huge quantity of wastewater is generated from these industries. Effluents generated from these industries are characterized by high COD value. In developing countries water is the most essential but inadequate resource. So to overcome this scarcity of water resource recycling of wastewater is one of the solutions. Now a day's different conventional methods are used to treat wastewater generated in these industries. The currently available conventional treatment consists of physical, chemical and biological methods. Further these methods have stringent requirement of pretreatment. These processes have high initial as well as operation and maintenance cost. Therefore, there is need of single treatment to treat wastewater. In this view, Electrocoagulation (EC) technique would play a major role in purification of wastewater. EC has been tested successfully for almost all types of wastewater. EC provides a relatively compact and all in one treatment alternative. EC is worth considerable because of its various advantages such as no chemicals addition, simple equipment, easy operation and decreased amount of sludge. This article aims to raise awareness of EC process by reviewing various studies on electrocoagulation of agro based industrial wastewater.

***Key words:--***

Agro based industries, Conventional treatment, Electrocoagulation, Water and wastewater.

# Implementation of the behavioral modeling approach for sarcasm detection

**Geeta Mehetre.,** MSS college of Engineering, Jalna.
**Prof M. B. Kalkumbe.,** MSS college of Engineering, Jalna

***Abstract:--***

Sarcasm is a function of "sarcastic" or "non-sarcastic" labeling. It is a challenging task because there is no pronunciation or sarcasm. Facial expressions in the text However, humans can still see the feeling of severity in the text and the reasons for it. The perception of the friction of the text is an important task for the processing of natural language to avoid the erroneous interpretation of the text in the form of text. The accuracy and durability of the NLP model are often affected by a sense of dishonesty, which is often a mockery. Therefore, it is important to filter the vocal data of training information for various tasks related to NLP. "I'm excited to be called to work all weekend!" It can be classified as a highly positive feeling. However, the fact that negative feeling is implied intelligently through cynicism. The use of cynicism prevails in social networks, subblogs and forms of electronic commerce. Cramp inspections are necessary for the correct confidence analysis and mining reviews. It can help improve automatic response in the context of client-based sites. Twitter is a small-scale blog platform widely used by people to comment, debate, discuss current events and convey information. Short Message Context The relevant context of the tweets is often identified using the Twitter # (hash-tag) data. It is a rich data repository for implicit sentences that have cynicism.

***Index Term:--***

Hashtags, Linguistics, Opinion Mining, Sarcasm Detection, Tweets, Stanford NLP

# Topic Based Modeling using Query Based Approach with Independent XML Structure Data

**Heena Malani.,** Dept of Computer Engineering, MSS College of Engineering Jalna, Aurangabad.
**Pro. S. R. Ghungrad.,** Dept of Computer Engineering, MSS College of Engineering Jalna, Aurangabad.

***Abstract:--***

Rapid adoption of XML as a standard for representation and exchange of information is an enormous amount of XML data retention and archiving on the Internet or in corporate data repositories. This will lead to the development of online decision support systems where users and analysts can interact large XML datasets through open query interfaces (such as XQuery or XSLT). Estimated responses are effective mechanisms to reduce response time and provide feedback to users. This approach has been successfully used in relational and more confident systems in the XML world. Complex evaluations of structured data are more expensive. Ranking and the most relevant search results became the most popular paradigm for processing XML messages. However, existing proposals did not adequately consider the structure, and therefore were not rational. Link structure to content to answer a relaxing question. To solve this problem, we offer a sophisticated query framework to support an approximate query of XML data. Responses under this framework do not need to be strictly adhered to. It may use a view that was subtracted from the original query. So we've developed a new top-of-the-line search method that can generate the most likely response in a ranking order relative to rank. We work with a comprehensive set of experiments to demonstrate the effectiveness of our approach in terms of precision and recall.

***Key words: --***

XML, approximate queries, query relaxations, top-k

# Artificial Intelligence Support Desk

**Hashmi Syeda Mateeba.,** ME.,CSE ,P E S College of Engineering , Aurangabad

***Abstract:--***

Human-computer support desk plays an important role in dynamic trading online, especially in B2C ecommerce. Further scientific investigations about designing the software agent that can deal with the human's random and inconsistent offer are in need, which is crucially useful for the online merchants to achieve better trading outcomes and save vast trading cost. The lack of such studies has decelerated the process of applying automated support desk to real world applications. To address the critical issue, this paper develops a strategy model. To demonstrate the effectiveness of this model, we develop a prototype and conduct human-computer support desk experiments over 121 participants. The experimental result shows that the agent with our newly designed strategy model can significantly increase the agreement rate and joint outcome of the both sides, and even can outperform human negotiators.

In order to develop a negotiating agent that has the ability to negotiate with human, it is of vital importance to elucidate how to design a negotiation strategy model to guide the agent's concession in the process of negotiation. A negotiation strategy is a decision-making model used by the participants to persuade the opponent towards the outcome they desire. There are two major approaches to design the strategy, the heuristic-based approach and the machine learning approach. However, several important dimensions have received limited attention in existing research of negotiation strategies. Firstly, past studies primarily focus on computer-computer automated negotiation, while relatively few studies have been carried out in assessing the potential of human-computer support desk. None can ignore the fact that the computer simulating negotiation environment is quite different with the negotiation that has human participating in, but systematic design and evaluation of agent strategies that incorporate a human counterpart's perspective is lacking. Secondly, a negotiation strategy is essentially a concession model that defines the utility decreasing sequence of offers.

# Performance Analysis of Epoxy Resin Based Composite C Shape Spring with E-Glass Fiber for Improved Part Loading Functionality

**J. B. Borse.,** Post Graduation Student in Mechanical (Design) Engineering Department, Late G. N. Sapkal College Engineering, Nashik, Maharashtra, India.

**Prof. P. S. Talmale.,** Assistant Professor, in Mechanical (Design) Engineering Department, Late G. N. Sapkal College Engineering, Nashik, Maharashtra, India

**Prof. D. B. Zoman.,** Assistant Professor, in Mechanical (Design) Engineering Department, Late G. N. Sapkal College Engineering, Nashik, Maharashtra, India

***Abstract:--***

In present industrial scenario suspension system is the most important parameter in all type of vehicle. The automobile world has keenly emphasized on progressive rate spring unit as an alternative to steel leaf spring, because of its good minor to maximum shock absorption and better part loading properties compared to leaf spring. This project work focuses on designing special C shape spring instead of leaf spring which serves the purpose of protection of the vehicle and comfort to the passengers. C shape and leaf spring are modelled with the help of Pro-E 4.0 software and FEA is done with the help of simulation software ANSYS 17.1.The experiments were conducted on universal testing machine, evolution of stresses in EN47 leaf spring and E-Glass/Epoxy C shape over the span are studied using strain gauge technique. And it is shown that the resulting design and simulation stresses are much below the strength properties of the material, satisfying the maximum stress failure criterion. FEA reading and experimental reading shows that the C shape spring not only has better bending strength but also deflection compared with existing suspension system. Hence provides better results as a suspension for the car and also use of composite material for C shape spring helps in reducing overall weight of the vehicle.This particular design is made specifically for light weight sedan. This work deals with the replacement of EN47 steel leaf spring with a composite C shape spring using E-Glass/Epoxy to obtain ride comfort at part loading functionality.

***Keywords:--***

C-Shape Spring; ANSYS; Deflection; Part Loading Functionality.

# Spatial instabilty analysis of axisymmetric boundary layer on circualr cylinder

**Karan Jani,** Department of Mechanical Engineering,Marwadi Education Foundation Group of Institutions, Rajkot, India
**Ramesh Bhoraniya,** Department of Mechanical Engineering,Marwadi Education Foundation Group of Institutions, Rajkot, India

***Abstract:--***

This paper presents linear stabilty analysis of incompressible axisymmetric boundary layer on a circular cylinder. The base flow is parallel to the axis of a cylinder and hence the angle of attack is zero. The pressure gradent is zero in the streamwise direction. The mass deficit effect is smaller comapre to the Blasius boundary layer. The parallel base flow assumption is considered. The stability equations are derived for the disturbance flow quantities in cylindrical polar coordinates. Chebyshev spectral collocaton method is used to discretize the stability equations. The discretized equations along with boundary conditions form a general egenvalues problem. QZ algorithm is used to compute all the eigenvalues. The spatial growth rate of the disturbances is computed for different Reynolds number and azimuthal wavenumbers. It is found that for convective instabilty flow should be temporally unstable. The azimuthal modes n=0, 1, 2, 3 are studied for the spatial growth rate at a given Reynolds number and frequency. The detail results will be presented during the conference.

# Study of Green Highway

**Kartikeya Shriwas.,** student,Department of Civil Engineering, Medicaps Institute Of Science And Technology.

***Abstract:--***

Road Transport is a critical infrastructure for economic development of a country. It influences the pace, structure and pattern of development. The capacity of National Highways in term of handling traffic (passenger and goods) needs to be in keeping pace with the industrial growth. India is having one of the largest road networks of over 46.99 lakh km. It comprises National Highways, Expressways, State Highways, Major District Roads, Other District Roads and Village Roads. In research paper discusses how to make green highway having reduced carbon emission, low air pollution, low noise pollution and also reduce UV radiation. Use industrial waste for the manufactured concrete green highway. Use street solar light and solar drip irrigation system on both sides of plants and in the plantation, those trees are reduced air pollution, noise pollution, reduce heavy metal in air and provide shade during the summer season.

***Keywords: --***

Green Highway, Carbon emission, solar Drip irrigation.

# A Study on Diesel Engine with Sunflower oil-Diesel Blends at Different Injection Pressures

**S.Kirankumar.,** Department of humanities and sciences, Hyderabad Institute of Technology and Management, Hyderabad.

**Dr.N.Govind.,** Associate Professor, Department of Mechanical Engineering, Rvr&Jc College of Engineering and Technology, Guntur, A.P, India

***Abstract:--***

The Injection pressure plays an important role in the engines performance and emission control of internal combustion engines. Present work describes the experimental investigations carried on a four stroke single cylinder water cooled diesel engine with sunflower oil diesel blends. Sunflower oil is blended with diesel in varying properties like (S10,S20,S30) and experiments was carried out by varying the injection pressures from 165 bar to 210bar. The performance characteristics like BTE, BSFC, and exhaust gas temperatures are investigated. Based on investigations, a comparison is drawn on engine performance with pure diesel operation and with different blends. Experimental results demonstrate that at 185 bar fuel injection pressure, the performance characteristics are observed to be better with blends when compared to the pure diesel operation. Maximum brake thermal efficiency observed is 38% with 20% blend at an injection pressure of 185 bar and lower specific fuel consumption observed is 0.25 kg/kw-hr with 20%blended at an injection pressure of 185bar.

***Keywords:--***

sunflower oil, brake power, injection pressure, specific fuel consumption, compression ignition.

# Bridging the Gender Bias to Foster Economic Growth in India

**Mrs Kirti Kalra**., Research Scholar, Gyan Vihar University.
**Dr Renu Pareek**., Professor , Gyan Vihar University.
**Mr. Avinash Kumar**., MBA Scholar, Arya College of Engineering & IT.

***Abstract:--***

Women constitute a sizeable segment of any community. One half of the world's population comprises of women and girls and without their empowerment and engagement in the work force it is impossible to achieve economic recovery and face the upcoming global challenges. There has been a huge disparity in the women's participation in economic growth in India. The current status of gender disparities in corporate policies and other relative practices in India indicates persistent threat to the growth of women as a potential workforce and drivers of economic growth. The participation of women in labor force and as entrepreneurs has been low over the past decade despite of rapid economic growth due to various socio-economic and cultural factors including security issues and poor infrastructure. There has been high unemployment amongst educated women but if the job availability and working conditions improved more women will be able to contribute to economic growth. The gender wage gap is another factor which keeps women away from work. According to the latest report by McKinsey it has been proved that India could add 60% to 2025 GDP by bridging the gender gap at work. This paper examines the reasons for gender bias at workplace in India and its repercussions along with the steps that should be taken to overcome the barriers which reduce women's contribution in economic progress. Thus, the Indian policies will have to be framed to increase participation of women in labor force, reduce wage differentials and improve the working conditions to promote talented women in leadership and managerial roles and also enhance work-life balance through planned efforts. Women are the invisible driving force behind the Indian economic scenario and such policies will surely lay out a potential path for all inclusive economic growth.

# Finite Element Analysis of Centrifugal Pump Impeller

**Krishan Kumar Singh**., PG Student, Department of Mechanical Engineering, Defence Institute of Advanced Technology (Deemed University) Girinagar, Pune, India

**S.V. Nimje**., Associate Professor, Department of Mechanical Engineering, Defence Institute of Advanced Technology (Deemed University) Girinagar, Pune, India

***Abstract:--***

A centrifugal Pump is hydraulic machines used in the process of transferring fluids from one place to other and these pump have a vibrant role in the domestic, industrial and marine application. The present work deals with the analysis of impeller with two different materials. The detail three dimensional FE analyses have been performed for impeller of centrifugal pump. The analysis of stress and deformation under loading environment such as pressure and rotational velocity have been evaluated for the present structure and critical location has been identified. An attempt has been made to investigate the effect of pressure and rotational velocity on the impeller with the purpose of estimating the magnitude of stress and deformation on the impeller with different materials. Study is also made to suggest the suitable material for an impeller of a centrifugal pump by comparing the results obtained for two different materials Stainless Steel (Grade 316 UNSS31600) and Nickel Aluminum Bronze (UNS C95800). Accordingly suitable recommendation has been made for impeller of centrifugal pump

***Keywords:-***

Impeller, Stress Analysis, Deformation Analysis

# CFD analysis of blood flow in artery with blockage

**Krunal Joisar**., Department of Mechanical Engineering, Marwadi Education Foundation Group of Institution, Rajkot, Gujarat, India

**Ramesh Bhoraniya**., Department of Mechanical Engineering, Marwadi Education Foundation Group of Institution, Rajkot, Gujarat, India

**Atal Harichandan**., Department of Mechanical Engineering, Marwadi Education Foundation Group of Institution, Rajkot, Gujarat, India

***Abstract:--***

Blood flow is the topic of interest for mankind from the ancient time because of its usefulness. Blood is very complex fluid which is nonhomogeneous and non-Newtonian in nature. Blood flows in the body with pulsating nature. Study of blood flow can be very helpful to improve the understanding of human body. Due to such complex nature it is very hard to study the blood flow in by experimental analysis, but with the help of CFD it is possible. CFD can be very useful tool to analyze the flow of blood in complex parts of body. Diseases related to blood flow such as atherosclerosis can be efficiently analyzed using CFD. In the present study blood has been simulated in 2D artery considering the 75 % blockage in the artery using the commercial software ANSYS FLUENT. The grid has been generated using the ANSYS MESH. The blood flow has been analyzed at various hematocrit for three Reynolds number. The effect of the variation of hematocrit on the flow and the effect of blockage is analyzed in the present study.

***Key Words:--***

Hematocrit; Non-Newtonian fluid; Atherosclerosis; RBC; WBC; CFD.

# Aspects study and discussion on 'Structural Health' with reference to pre-construction and ongoing construction stage of a structure.

**Ar. Leena Prasad Aphale**., Assistant Professor, Dept. of Arch, MIT, Aurangabad
**Ar. Swapna Ashok Dhavale**., Assistant Professor, Dept. of Arch, MIT, Aurangabad
**Er. Prasad Arun Aphale**., Structural and R.C.C Designer, Aurangabad

***Abstract:--***

Structural health monitoring is a technical process which has been activated or treated at post construction level by the expertise and structural auditor. A lot of emphasis has been given for the post-construction structural health monitoring techniques, but 'Pre-construction' and 'During construction' stage of a structure are also equally important so that minimum requirement of process and best quality assurance will be achieved to make the project economically sustainable over a long period. While thinking for the above mentioned new aspect of health improvement, majorly three early stages are to be taken in to consideration as- Architectural design and planning, structural and RCC design, and construction stage which make a 'golden triangle' where major role of Architect, Structural engineer and contractor is defined. This paper is a sincere effort to discuss and application of health improvement and monitoring aspects during pre construction stage and ongoing construction process with the examples and remedial solutions.

***Keywords: -***

Structural Health, Preconstruction, Architectural planning, Structural design

# Effect of Suction Slots on Radial Bladed Impeller of a Centrifugal Blower - A Numerical Study

**Vipin Khalia**., Department of Mechanical & Manufacturing Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal

**Swapan M. V**., Department of Mechanical & Manufacturing Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal

**Madhwesh N**., Department of Mechanical & Manufacturing Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal

***Abstract:--***

The recirculation zones present in between the blade passages give rise to subsequent losses in centrifugal blowers. Many researchers have tried to minimize the losses by various treatment methodologies like fences, grooves, splitter vanes etc. The main objective of this study is to realign the flow at the suction side of the impeller by weakening the recirculation zones. This can be achieved by providing slots on the impeller blade geometry, which will efflux the flow from the pressure side of the impeller towards its suction side. Effects of single and multiple slots were tested and analyzed to streamline the flow. It is found from the numerical study that the single slot provided at a location of 25% in the radial direction from the impeller tip improved static pressure recovery of the blower. The double slots located at 50% and 25% from the impeller tip significantly contribute to the higher static pressure recovery across the blower.

***Keywords:-***

Flow separation, Recirculation zone, Suction slot, Transient analysis.

# Inquiry Base Learning Using Immersive Virtual Automation

**Mayur S Bhamare**., Dept.of Electronics and Telecommunication Late G.N.Sapkal College of EngineeringNashik,India
**Kavita J Mahajan**., Dept.of Electronics and Telecommunication Late G.N.Sapkal College of Engineering Nashik,India

***Abstract:--***

Robotics is the future of the modern era and the people wants it more entertaining and the user friendly.Newly launch controllers that improving the concentration of the developers and programers towards the robotics.this paper presents the one such device,that is leap motion technology and Augmented and virtual reality and its implementation in new age robot the robotics system developing till now also the new experience to the students and industrial trainees.It needs a google cardboard,personal computer and smartphone and gesture control sensor that is nothing but Leap motion controller.This robot can assist a lot in search and shopping mall and industrial appliction for making human life simple and entertaining also useful for Inquiry Based Learning using Mixed Reality and leap motion.

***Keywords:--***

Virtual Reality,Augmented Reality,Leap Motion,Mixed Reality,Unity3D,IBL.

# Comparative Study of Management Information System and Decision Support System

**Dr. Arun Mohan Sherry**., Senior Vice-President/Dean & Head of Academics, Deogiri Institute of Engineering and Management Studies

**Mayur Desai**., Research Scholar, Deogiri Institute of Engineering and Management Studies.

***Abstract:--***

Management information systems(MIS) is an organized, diverse and automated information system that is concerned with the process of gathering, storing and transferring relevant information to support the management operations in an organization. The data is distributed among the various departments in an organization. MIS work on online mode with an average processing speed .Generally, it is used by low level management .Decision support system are powerful tool that assist corporate executives , administrators and other senior officials in making decision regarding the problem. This paper focuses on understanding the concept of IS, DSS, MIS, the MIS model,Comparison ofMIS and DSS, decision making system and majorly the role of MIS in decision making.

***Keywords:--***

MIS, DSS, Information System, Decision making system,

# A review paper on "Multi objective optimization of process parameters in shielded metal arc welding for joining stainless steel 304l and mild steel 1018"

**Abhiram M Budrukkar**., PG Student Mechanical Engineering Department, Deogiri institute of engineering and management studies, Aurangabad

**Umesh S. Patil**., Assistant Professor Mechanical Engineering Department, Deogiri institute of engineering and management studies,Aurangabad.

***Abstract:--***

The Quality of weld mainly depends on mechanical properties of the weld metal and heat affected zone (HAZ), In this research work the review of Multiobjective optimization of welding process parameters for obtaining greater weld strength with good mechanical properties of dissimilar metals like stainless steel 304l and Mild steel 1018 is done. The process used for welding is shielded Metal Arc welding and dissimilar metal used are stainless steel 304l and mild steel 1018. Welding speed, voltage, current, electrode angle, feed rate, Arc length are taken as controlling variables. The weld strength (N/mm2) and Bead geometry variables and Heat Affected Zone are obtained through set of experiment. Based on the previous research, the possible best outcomes and best method has been chosen.

***Index Terms:--***

HAZ, Multi objective optimization, Response surface Methodology, Shielded metal arc welding.

# Self-healing Capability of Various Synthetic Fibers – A Review

**Mohd Nasim**., PhD Research scholar, NIT Raipur.

**Dr. U.K Dewangan**., Professor, Department of Civil Engineering, NIT Raipur

***Abstract:--***

This paper reviews the self-healing capability of Fiber-reinforced cementitious composite (FRCC) using various synthetic fibers. Cracks are a common occurrence in concrete due to various combinations of reasons and its low tensile strength. The occurrence of cracks and micro cracks in hardening concrete endangers the durability and mechanical properties of concrete. Prevention of cracks is essential and significant for extending the service life of concrete structures and to check its maintenance costs. Self-healing is being looked upon as a future technology in concrete, to control and heal cracks. So, the use of synthetic fibers in FRCC to controls the crack width and the fibers bridge the cracks and thus to promote the self-healing efficiency. Self-healing studies on FRCC using synthetic fibers are still limited. Therefore, the main aim of the review is to identify the research gap for further studies in the emerging field of self-healing concrete using different synthetic fibers and to summarize the effect of synthetic fibers on various vital properties of concrete such as workability, strength, and durability. Finally, the scope of future research work is identified and discussed.

***Keywords: --***

Concrete, Cracks, Fibers, Self-Healing

# Intelligent Street Lighting System

**Monali Y. Khachane**., Yashwantrao Chavan School of Rural Development,Shivaji University,Kolhapur.

***Abstract:--***

The current research work is carried out for designing and executing the advanced development in embedded systems for energy saving of street lights. In India at many places manual street lighting system is installed and taken cared by municipality. Evening before the sunset's street lights are switched ON and switched OFF in the next day morning. Another scenario is automated time setting is also used for street lighting. At few places after midnight all street lights are switched off. These all scenarios ultimately wasted up power.But the actual timing for these lights to be switched ON is when there is absolute darkness and glow only when there is a movement of vehicles or humans. To avoid the problems associated with street lighting system, the fully automated energy efficient system is proposed to perform the ON and OFF operations only when needed. Also the system is intelligent enough to communicate with the municipality office if any maintenance is needed. The proposed system is designed by using Arduino UNO and Bluetooth devices. Light Dependence Resistance (LDR) and Motion Sensors are used for designing the system. The proposed system is successfully fulfilled the designing purpose.

***Keywords: --***

Arduino UNO, PIR Sensor, LDR Sensor, Bluetooth

# An Intelligent Crawler

**Mrugnayani Sharma**., PG Student, Department of Computer Science and Engineering, Deogiri Institute of Engineering and Management Studies (DIEMS), Aurangabad, India

**Padmapani P. Tribhuvan**., Assistant Professor, Department of Computer Science and Engineering, Deogiri Institute of Engineering and Management Studies (DIEMS), Aurangabad, India

***Abstract:--***

A web crawler is a software program or programmed script that browses the world extensive web in a systematic, automated manner. Web crawler peregrinates from web page to page via the making use of the graphical structure of the internet pages. Such programs are additionally kenned as robots, spiders, and worms. In this work explained further, Data mining algorithms were used to introduce intelligence into the crawler. A statistical analysis of the performance of intelligent crawler is presented in this work. While introducing crawler intelligence, data mining algorithm plays an important role. The main objective is to develop an intelligent crawler to serve the purpose of web-indexing which helps in gathering relevant information from over the Internet with the help of search engines. The intelligent crawler must perform crawling in minimum time with a maximum number of results.

***Keywords:-***

crawler, crawler intelligence, statistical analysis, web indexing.

# Entity-Centric Multimodal Aspect-Opinion Mining in Social Media Using Named Entity Recognition

**Nasrin Shah**., MSS College Of Engineering, Jalna
**Prof. S. N. Gite**., MSS College Of Engineering, Jalna

***Abstract:--***

This article describes the guidelines we use to analyze our opinions, including comments on text and multimedia (images) and the perception of entities and events. Identification is a subset of confidence analysis, which consists of specifying a comment in a comment, such as a specific review of a product or service, a reviewer, a compliment, or a complaint. We use POS tagging to tag individual words in non-verbal or non-verbal terms. We also developed a set of linguistic forms for the same purposes and integrated them into the classifier. The traditional approach we take is a rule-based approach, which we consider subset, taking into account problems that exist in the social colony, such as noisy syntax or misspellings, oaths, or patterns. Other words of skepticism, and so on. Multimedia content analysis makes this work perfect for solving ambiguity issues and providing other contextual information. The main task for this: First, the combination of new tools to extract information from text and multimedia; Secondly, the adaptation of the NLP tool for exploring specific information to solve the problem. The classifier combination with the embedded word model for confidence analysis helps our approach to better accuracy than modern methods.

**26th -27th February 2018** **ICTIEM – 18** **ISBN: 978-81-932966-8-4**

***Organized by:***
**Deogiri Institute of Engineering and Management Studies**
***And***
**Institute For Engineering Research and Publication (IFERP)**

# Analysis and Design Considering Ductile Detailed Reinforced Concrete Structure With Reference to is 13920:1993 ( Old Version) And Is 13920:2016 ( New Version).

**Nikhil Lokhande**., PG Student, Deogiri Institute of Engineering and Management Studies (DIEMS), Aurangabad, India

***Abstract:--***

For earthquake resistant structures, ductility provides enough scope in making the structure more resistant. If ductile members are used to form a structure, the structure can undergo large deformations before failure. This is beneficial to the users of the structures, as in case of overloading, if the structure is to collapse, it will undergo large deformations before failure and thus provides warning to the occupants.
An Earthquake resistant structure demands reinforcement detailing to be as per IS 13920. With the provision of ductile detailing on RCC frame it becomes a special moment resisting frame. Now with the new published code of ductile detailing provide a sufficient changes in the structure detailing. Hence the building made in past with the old code will less detailed for a high seismic forces in comparison to the new building to be analyze as per the new revised code of IS 13920. Deflection will be considered for analysis and comparison.

In this paper dynamic analysis is done by using STAAD-Pro software for a non-ductile structure, for a ductile detailed structure using IS 13920:1993 ( old version) and a ductile detailed structure using IS 13920:2016 ( new version) of a G+10 storied building.

***Keywords:--***

Ductility, Earthquake resistant structures, ductile detailed structures, Deformation, STAAD-Pro.

# Water Quality Assessment and Modeling of Parameters in Pawana River for Pimpri-Chinchwad Water Treatment Plant

**Nilay Warkhedkar**., Pimpri Chinchwad College of Engineering , Chinchwad, Pune.
**Sumeet Varyani**., Pimpri Chinchwad College of Engineering , Chinchwad, Pune.

***Abstract:--***

This paper presents a study of seasonal and spatial variation in the water quality parameters in Pawana river of the Pimpri Chinchwad municipal corporation area. Grab samples were collected from various points along the river from the source to the pumping station of the PCMC water treatment plant. The samples were collected twice after every 15 days over a period of 8 months. A mathematical model has been prepared by employing regression analysis of experimental data.

***Keywords:--***

water, water quality, WTP, PCMC, grab sample, mathematical model

# Assessment of Quality of Distributed Water in Miraj City – A Case Study

**O. S. Pore**., M. Tech Student, Walchand College of Engineering, Sangli.
**G. R. Munavalli**., Professor, Walchand College of Engineering, Sangli.

***Abstract:--***

The quality of water changes during its travel in Water Distribution System (WDS). There were many complaints about the quality (odour, taste, and color) of supplied water in Miraj city. The city has six different water distribution zones with intermittent water supply. The present study was carried out to examine how the water quality changes in Shivajinagar area of Miraj city. The locations of monitoring include at Water Treatment Plant (WTP), Elevated Service Reservoirs (ESR), intermediate points within the network and remote points during the period October to December 2017. The parameters analyzed included residual chlorine, turbidity, total coliforms by Most Probable Number (MPN), pH, chlorides concentration, Total Hardness (TH), Total Dissolved Solids (TDS), and Electric Conductivity (EC). It was observed that residual chlorine, turbidity, and MPN significantly changed. The study concluded that there was quality deterioration of water at WTP and other locations in the study area. The observations from the current study will help to improve the operation of water distribution system of the city.

***Keywords:--***

Microbial Quality, Residual Chlorine, Water distribution system, Water Quality.

# Stabilization of Black Cotton Soil Using Natural Geotextile

**S.B. Kapse**., Assistant Professor, Department of Mathematics, Deogiri Institute of Engineering and Management Studies, Aurangabad (M.S)-431005, India.

**P.G. Gaikwad**., U.G Student, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad (M.S)-431005, India

**S.S. Takte**., U.G Student, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad (M.S)-431005, India

**S.S.Kulkarni**., U.G Student, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad (M.S)-431005, India

**S.A Pawar**., U.G Student, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad (M.S)-431005, India

***Abstract:--***

Soil is the major and most commonly used material in the field of Civil Engineering. Where ever it is used for construction, foundation, bricks, pavements it should provide considerable strength for the stability of the structure. Soil is a deposit of earth material, obtained naturally from disintegration of rocks or decay of vegetation which can be excavated readily with power equipment in the field or disintegrated by mechanical means in the laboratory. There are various types of soil on the earth depending upon their material properties, size, texture &other. Black cotton soil is a type of expansive soil in which it expands in its volume in wet condition and shrinks in dry condition. Expansive soil causes more damages to the structures. Current research work shows that the strength of black cotton soil increases with increasing the percentage of rick husk (5% to 15%). Also there may be increase in the strength of soil by using coconut coir and jute.

***Keywords : --***

Black Cotton Soil, Coir, Rice Husk Ash, Stabilization

# Impact of Sugar Industry Effluent on Quality of Groundwater – Review

**Kumbhar P.V**., M. Tech Students, Walchand College of Engineering, Sangli
**Wagh C. H**., Associate Professor, Walchand College of Engineering, Sangli

***Abstract:--***

Groundwater is an important part of the water cycle and it is major primary source of drinking water as well as agricultural purposes. The rapid industrialization causing serious issues regarding the exposure of groundwater contamination due to discharge of treated or partially treated wastewater from industries. So, it is necessary to assess the groundwater quality. The aim of this review paper is to find impact of sugar industry effluent on quality of groundwater based on groundwater quality index. Sugar industry is most important agro based industries in India. Sugar industries effluent mainly contains nitrates, phosphorous, alcohols, suspended solids and heavy metals such as cadmium. The discharge of sugar industry effluent percolates through soil which causes the contamination of groundwater, surface water and soil which furthermore increases some serious public health hazards. The overall water quality status described by Water Quality Index (WQI) through which numerical score obtained from integration of complex water quality parameters. One of the main aspects for prediction of different parameter ranges is correlation analysis within the degree of accuracy. In present review paper attempt has been made for the study of physico-chemical characteristics of sugar industry effluent, impact of sugar industry effluent on groundwater quality and soil, assessing Water Quality Index for groundwater, Regression and Correlation Coefficient among water quality parameters.

***Index Terms:--***

Groundwater quality, Physico-chemical characteristics, Regression and Correlation coefficient, Sugar Industry effluent, Water Quality Index.

# Seismic Performance of RC Diagrid Frame Structures

**Mr.Pradip S. Mali**., Student, M.E. Structural Engineering, DIEMS Aurangabad, 431001, Dist. Aurangabad (M.S), India.
**Prof. D. S. Wadje**., Asst.Professor,Civil Engineering Dept., DIEMS Aurangabad, 431001, Dist. Aurangabad(M.S), India.
**Dr. G. R. Gandhe**., Professor& HOD,Civil Engineering Dept., DIEMS Aurangabad, 431001, Dist. Aurangabad(M.S), India.

***Abstract:--***

Development in construction technology, structural systems, material, analysis and design software facilitated the growth of the tall structures. Now, the diagrid structures are widely used due to the structural efficiency and aesthetic view. The diagrid is a framework of diagonally intersecting steel, concrete or timber members that is used in the construction of buildings. A triangular shape is formed in the diagrid structural systems because of the modules. These modules are effective in carry all the loads i.e. lateral as well as gravity and distribute all this loads in a very uniform and regular pattern by axial action of the diagrid. In this paper, analytical study of 24 storey building with square floor plan of 18 m × 18 m size with conventional frame system and diagrid frame system is carried out. There are four models are choose for the study. For modeling and analysis of both structure i.e conventional and diagrid frame structure ETABS software is used. For seismic analysis structure, linear dynamic approach i.e. response spectrum method is used as per IS 1893 (Part I): 2002. The comparison of analysis of results in terms parameters such as top story displacement, story drift, story shear and time period is presented here.

***Keywords:--***

diagrid frame structures, conventional frame building, ETABS,linear dynamic approach, response spectrum method ,storey displacement, stoery drift, storey shear ,time period.

# Design and mathematical modelling of mixed mode solar dryer applicable for small scale application

**Pranav Mehata**., Marwadi Education Foundation Group of Institutions, Rajkot, Gujarat, India-360003
**Ramdevsinh Jhala**., Marwadi Education Foundation Group of Institutions, Rajkot, Gujarat, India-360003
**Atal Bihari Harichandan**., Marwadi Education Foundation Group of Institutions, Rajkot, Gujarat, India-360003

***Abstract:--***

The new mixed mode solar dryer was designed and developed. As the open sun drying technique was time consuming as well as less efficient, the natural convection solar dryer of mixed mode was designed and developed. The design and mathematical modelling of the two parameter absorber plate outlet temperature and the relative humidity was carried out. The dryer was operated without any load inside it and operated for the two months. The average wind speed was measured to be 0.50m/s where as the average solar insolation was 1200W/m2 received over the inclined plate. The designed value of the absorber plate was 2.0 m2.The drying chamber was made by plastic sheet in which spectrum of solar insolation which tends to discoloration of the food products or agricultural is prevented. The ambient temperature was observed to be 28°C averagely through the experiment. The results are in good agreement with the theoretical results and dryer will be operated with the different high moisture product in the future and performance evaluation can be done. The food items with high moisture content such as 80% - 90% (w.b.) can be reduced to a final moisture content of the 10% - 15% (w.b.) in less duration as compared to the open sun drying. Also the dryer is made be locally and economically viable material.

***Keywords:--***

Mixed mode solar dryer, Indirect mode solar dryer, Design of dryer, absorber plate outlet temperature, Relative humidity inside the dryer, dryer outlet temperature.

# Fabrication and Characterisation of Al-Li-SiCp Composite for Aerospace Application

**R Anthoni Sagaya Selvan**., M.Tech Scholar, Department of Mechanical Engineering, DIAT (DU), Ministry of Defence, Pune, India

**Dineshsingh G. Thakur**., Associate Professor, Department of Mechanical Engineering, DIAT (DU), Ministry of Defence, Pune, India

***Abstract:--***

The desire for more fuel efficient materials in the Aerospace industry leads to the rigorous research on Aluminium-Lithium alloy since early of 19th century. Although the addition of Lithium improves additional benefits like weight reduction and improved elastic modulus of Aluminium but it also adds some of the unavoidable undesirable properties. Hence, in the search of improving the desired properties and reducing the undesirable properties due to the addition of Lithium into the Aluminium, several independent study are being undertaken by many researchers across the world through different processes. One of the methods to achieve this is addition of ceramic particulates (SiCp) with Aluminium-Lithium alloy. Hence, this paper deals with the fabrication of Al-Li-SiCp composite, which were fabricated through modified conventional stir casting machine with Argon gas environment. The present electrical aluminium stir casting machine was modified in such a way that Aluminium-Lithium alloy casting could be performed in that without losing the Lithium content in the alloy. Also the additional modification of stirrer mechanism to move UP and DOWN motion ensures thorough vortex formation in the melt thus allows proper distribution of reinforcements in the composites. The Aluminium alloy used as matrix material in the study is an 8090 Al–Li alloy which has a lithium content of about 2.14%. Two composites were fabricated with different weight fraction such as 2%, and 5% of SiCp (40μm particle size) as reinforcements. The addition of SiC particulates increases the hardness value of the composite as per their weight addition in the composite. In case of the composite reinforced with 5% SiCp, the hardness values are found to be higher than Al-Li-2% SiCp, which is higher than the past reported value from previous study. The FESEM image shows the different distribution surface morphology of reinforcements in the composites. It is evident that the difference of micro hardness value obtained between the two composites can be easily correlated with the characterisation of reinforcement distribution and its weight percentage of the addition in the composites.

The study through optical microscope also shows the microstructure of Al-Li-5% SiCp composite exhibits equiaxed grain structure, but other composite exhibits dendritic nature which is the one of the reason behind the micro hardness value between the two composites.

***Keywords:--***

Al-Li with SiCp composite, Microhardness, Modified Stir Casting, FESEM

# Green Concrete Using GGBS

**R. R. Kshirsagar**., Under-Graduate student, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India.

**S. A. More**., Under-Graduate student, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India.

**A. K. Kumbhakarna**., Under-Graduate student, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India.

**S. P. Nirkhe**., Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India

**R. S. Patil**., Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India

***Abstract:--***

A mixture of cement, fine aggregate, coarse aggregate and water is term as Concrete. Concrete is key in the development of infrastructure viz. Buildings, industrial structures, bridges and highways etc. Concrete is most commonly used in all types of construction with an annual production exceeding 2 billion metric tons per year. But the production of raw material of concrete has certain detrimental effects on environment. Worlds 8% to 10% of total CO2 emission come from manufacture of cement. Therefore, the main aim of project is to reduced amount of cement by replacing it with GGBS to the optimum level so that energy required for cement production can be saved and during production of cement emission of greenhouse gases like CO2 takes place which leads to air pollution will be minimized with use of GGBS (Ground Granular Blast Furnace Slag). Also, to check compressive strength, Tensile strength and Flexural strength of concrete by replacing cement with different percentage of GGBS.

***Keywords:--***

Compressive strength, Concrete, CO2, Environment, Flexural strength, GGBS, Tensile strength.

# Seismic Performance of Multi-Storied RC Moment Resisting Frames Based on Plan Aspect Ratio by Pushover Analysis

**Hujare R. B**., M.Tech Student, Walchand College of Engineering, Sangli
**Tande S.N.**., Professor, Walchand College of Engineering, Sangli

***Abstract:--***

In urban areas, most of the owners, building contractors, engineers are adopting vertical development of buildings for the construction. This is because the horizontal development gets restricted due to increase in population and scarcity of land. Natural hazard like earthquake affects the stability of such structures. Performance of structures in different areas of Northern part of India, during the earthquakes, is reviewed. The earthquake caused damage to heritage structures as well as modern buildings. Both masonry and reinforced concrete buildings showed poor performance. Previous studies reveal that major failures of structures occurred due to improper design procedures. Therefore, it is need of time to analyses & designs such hazard resisting structures so as to save human life and avoid property damage. The behaviour of a building during earthquakes depends critically on its overall shape, size and geometry. Nonlinear pushover analysis has been used to evaluate the seismic performance building with four different plans having same area and height. The results of effects of plan aspect ratio on seismic response of buildings have been presented in terms of displacement, base shear. And most suitable configuration of building which gives maximum base shear at performance point is also obtained.

***Keywords:--***

Aspect ratio, Base shear, Pushover analysis, Seismic Performance

# Analysis of residual stress and distortion for the manufacturing of axle drive shaft

**Rajeshdan Gadhavi**., Department of Mechanical Engineering, Marwadi Education Foundation Group of Institutions, Rajkot.
**Nirav Doshi**., Department of Mechanical Engineering, Marwadi Education Foundation Group of Institutions, Rajkot.

***Abstract:--***

This paper analyses the effect of residual stress in the distortion of the axle drive shaft. Residual stress is the stresses that remain in a solid material after the original cause of the stress has been removed. A axle drive shaft of 20MnCr5 material is been analyzed. Research is carried out on two axle drive shaft. In one shaft, after the last manufacturing step was sent through residual stress relief process by shot peening process. And both shaft after going through heat treatment process showed variation in distortion. The shaft with stress relief treatment showed less amount of distortion compared to the other shaft. Therefore a stress relief, shot peening process is recommended for reducing the distortion in axle drive shaft.

***Keywords:--***

Residual stress, axle drive shaft, heat treatment

# Numerical Analysis of Fly Ash Slurry Transportation through Centrifugal Pump

**Patel Rajkumar**., PG Student, Department of Mechanical Engineering, Defence Institute of Advanced Technology (DU), Pune (411025), Maharashtra, India

**Pravinkumar Hadgekar**., Assistant Professor, , Department of Mechanical Engineering, Defence Institute of Advanced Technology (DU), Pune (411025), Maharashtra, India

**Dr. Sunil Chandel**., Assistant Professor, , Department of Mechanical Engineering, Defence Institute of Advanced Technology (DU), Pune (411025), Maharashtra, India

***Abstract:--***

In this work the computational analysis of a centrifugal pump is done using ANSYS CFX. In this work effort is carried out on a numerical validation of a transportation of a fly ash slurry through centrifugal pump, with results available in literature. In this work simulation is conducted at different concentration of fly ash slurry as well as on water to analyse the flow behavior in centrifugal pump. This all simulation can be divided in three parts 1st is creating centrifugal pump geometry using Vista CPD tool ,in next part meshing is done using TurboGrid tool and boundary conditions are given. In last part simulations are carried out at different concentrations (i.e. 60.4% $C_w$, 65.2% $C_w$, and 70% $C_w$) of fly ash slurry. Interface model used for rotor and stator interaction is frozen rotor model (i.e. rotor is impeller and stator is volute). k-Epsilon Turbulence model is used in simulation. Results of the simulation obtained are in similar pattern of results available in literature. Results shows that at rated speed the head developed of the pump is reduced with increase in solid concentration and slurry flow is strongly depends on viscosity of the slurry.

***Keywords:--***

Centrifugal Pump, Computational Fluid Dynamics, Fly ash slurry

# Deduplication and Security Using 3D AES over Cloud

**Renuka C. Deshpande**., Department of Computer Science and Engineering Marathwada Shikshan Prasark Mandal's Deogiri Institute of Engineering & Management Studies, Aurangabad Maharashtra state, India 2016-2017

**Ms. S. S. Ponde**., Associate Professor, Department of Computer Science and Engineering Marathwada Shikshan Prasark Mandal's Deogiri Institute of Engineering & Management Studies, Aurangabad Maharashtra state, India 2016-2017

***Abstract:--***

Deduplication process is being mostly use in cloud server space to shrink the quantity of server space and reduce network bandwidth. To eradicate duplicate pieces of repeat data, Data deduplication is exclusive data compression proposal used. To protect the confidentiality & isolation of receptive data while supporting deduplication, the convergent encryption method has been proposed to encrypt data before outsourcing. To healthier data defense, this manuscript takes the primary effort to properly deal with the difficulty of certified data deduplication. Apart from usual deduplication structure, the differential rights concept for users is further measured in replica check moreover the records itself. There are numerous novel deduplication construction supporting certified replica check in a fusion cloud architecture. Security investigations express that our proposal is secure in conditions of the characterization specified in the proposed security representation. As a evidence of conception, we implement a trial product of our future certified duplicate check scheme and conduct testbed experiments using our trial product. We include SHA-1 algorithm to deduplicate data, IBE for the authentication of users. We also enhanced security of cloud data by using symmetric algorithms i.e. Modified (3D) AES with least operating cost evaluate to previous research operations. The proposed results find that the storage, speed and security have been increased compared to previous research operations.

***Keywords:--***

Deduplication, Confidentiality, Hybrid cloud, differential privileges, 3DAES.

# Smart load controller for hybrid generation

**Rutuja Kshirsagar**., BE Electrical engineering, Sou. Sushila Dhanchand Ghodawat Charitable Trust's, Sanjay Ghodawat Group Of Institutions, Atigre, Kolhapur.

***Abstract:--***

The average power available from hybrid generation is not constant because of season effect. The controller is design in such a way that the available power can be utilizing maximum by proper selection of load. This system also used as stand-by unit. The system is based on arduino which gives the advantages like effortless function and large community. Continuous measurement of voltage and current is possible. The aim of this project is to provide over current protection and individual line control.

***Keywords:--***

Hybrid generation, arduino controller, maximum power utilization, over current protection, stand by unit.

# "Used of Galvanized Iron Sheet to Control Evaporation Losses in Farm Pond"

**S. S. Sonawane**., Under-Graduate student, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India.

**R. V. Khiste**., Under-Graduate student, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India.

**O. M. Kulkarni**., Under-Graduate student, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India.

**S. P. Nirkhe**., Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India.

**R. S. Patil**., Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India.

***Abstract:--***

One of the precious gifts of nature which sustain life on earth is water. Water has been used since antiquity as a symbol by which to express devotion and purity. As per Indian standard near about 1150 mm depth of water in traditional farm pond is evaporated per year in India. To overcome of evaporation losses by traditional method we used modified method by using Galvanized Iron sheet near farm pond. For this work we choose farm pond located at Pimplegaon in Jalna district. By using modified method, we got significant amount of water control in evaporation losses.

***Keywords:--***

Evaporation, Farm pond, GI sheets, Water.

# The Impact of Air Pollution on Human Health

**Prof. S.B.Divate**., Department of chemical Engineering, Pravara Rural Engineering College , Loni
**Prof.S.R.Kadam**., Department of chemical Engineering, Pravara Rural Engineering College , Loni

***Abstract:--***

Today different type of pollution has observed that not only hazardous to the animals, human being but also affects worldwide . Air pollution is initiated by substances in the air caused by natural emissions or by anthropogenic activities. Important anthropogenic air polluting substances are nitrogen oxides, sulfur oxides, volatile organic compounds, methane, carbon monoxide, and particulate matter. The accumulation of air pollutants in the atmosphere in large quantities and of longer duration poses harm to human health affect manmade structures as well as change the patterns of weather and climatic systems Vehicle emission and stationary source fuel combustion are the primary sources of air pollution. Due to air pollution public is suffering from respiratory disorders. In many towns and cities exposure to air pollution is the main environmental threat to human health. Long time exposure to high level of toxic elements and small particulate matter in the air also contributes to wide range of chronic respiratory diseases, aggravates heart diseases. Manmade activities increase emission of particulate matters and gaseous matters has rise, Expansion of industries and transport systems has made this situation more critical. This paper briefly discussed the effects of air pollution upon human health with emphasis on primary air pollutants

# Seismic Analysis of Vertically Irregular building With and without Softstorey at different levels

**Sameer chandwadkar**., P.G.Student,Deparment of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad, Maharasshtra, India.

**prof.Dilip wadje**., Assistant Proffesor, ,Deparment of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad, Maharasshtra, India

**Dr. G.R.Gandhe**., Proffesor, Deparment of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad, Maharasshtra, India

***Abstract:--***

With urbanization and increasing unbalance of required area to availability, it is important to provide open ground storey in both type of buildings that is commercial and residential. These open storey's without brick infill reduce the stiffness of the load carrying member and progressive increase in load exhibit higher stresses in the load carrying member and these members i.e. columns fail as the plastic hinges are not formed on predefined positions. Therefore, the collapse of this soft storey during earthquake has caused structural engineer store think the design of a soft storey. This paper focus on performance and evaluation of 13 storey RC building with and without soft storey at different level . In this Paper 4 buildings out of which one is irregular, in elevation, 3irregular buildings with Soft storey at different level and in elevation. Three methods of analysis namely Linear Static Analysis (equivalent Lateral load method), Response Spectrum analysis and Nonlinear Staic analysis (Pushover analysis) has been used. After the analysis results are evaluated for each model and results are compared. the Description of Geometry and procedure carried out in ETABS for each model.

***Keywords:--***

Building Configuration, ETABS-2015, Linear Static Analysis, Pushover Analysis, Response Spectrum .

# Achieving Efficient Multi-Keyword Ranked Search over Encrypted Cloud Data Using Bloom Filters

**Sana Shaikh**., ME Student, Department of CSE, Deogiri Institute of Engineering and Management Studies, Aurangabad, Maharasshtra, India.

***Abstract:--***

Today most organizations are preferring to outsource their data on cloud. The outsourced documents and files should be encrypted because of the protection and secrecy worries of their proprietor. As a large amount of data from various clients is getting accumulated on cloud, this raises the issue of security and privacy to its proprietors. Data being large, quick efficient and authorized search is also a challenge. An efficient multi-keyword ranked search scheme is proposed in this paper that is able to address the aforementioned problems. Bloom filters are used to enhance search duration. Relevance scoring technique is used to generate ranking results in view of the top-k precision. Inside of this framework, we implemented the blind storage technique to cover access pattern of the search user. Till now the search authorization problem was not considered, that requires the cloud server only to return the search results to authorized users. In this paper, we propose an authorized and ranked multi-keyword search scheme over encrypted cloud data. Identity Based-authentication is used for authentication with AES for encryption. As a result, information leakage can be eliminated and data security is ensured. Thorough security and performance analysis show that the proposed scheme can achieve much improved efficiency in terms of accuracy, search time and security compared with the EMRS i.e Efficient Multi-keyword Rank Search scheme .

***Index Term:--***

Cloud Computing, Bloom Filter, Relevance Scoring, Search Authorization, Blind storage, Identity Based- authentication, AES.

# Decision Support System for Fertilizer Recommendation

**Ms. Savita M. Gungewale**., Department of Computer Science and Engineering, Nagesh Karajgi Orchid College of Engineering and Technology, Solapur.

**Dr. V. V. Bag**., Department of Computer Science and Engineering, Nagesh Karajgi Orchid College of Engineering and Technology, Solapur.

***Abstract:--***

India is known as an agricultural country, where the recommendations for use of fertilizers is given by traditional methods. At present, recommendations for farmers are based on communication between farmers and experts and different experts have variety of recommendations. The proposed work uses past agricultural activities as a data for providing recommendation to the farmers. The objective is to develop a decision support system for optimizing fertilizer used for agriculture, enabling farmers to maximize crop yields, save cost and increase their profits. In proposed system data mining is applied to recommend fertilizers which are interpreted from different soil test results. C4.5 can be used to effectively classify training data and use that training data to recommend fertilizers. The proposed system accepts nutrients and crop as an inputs and recommends organic, inorganic fertilizers and remark as a result. The farmers get access to an easy-to-use interface that eliminates the guesswork and minimizes the uncertainties involved in making fertilizer management decisions.

***Index Terms:--***

Agriculture, C4.5 Algorithm, Classification, Data Mining, Farmers, Fertilizers Recommendations.

# College Placement Management System and Resume Generation

**Shivani Bahadure**., BE Students, Bapurao Deshmukh Collage of Engineering, Sevagram.
**Bhairavi Lanjewar**., BE Students, Bapurao Deshmukh Collage of Engineering, Sevagram.
**Mrudula Mankar**., BE Students, Bapurao Deshmukh Collage of Engineering, Sevagram.
**Snehal Parbat**., BE Students, Bapurao Deshmukh Collage of Engineering, Sevagram.
**Prof. R. B. Ghate**., Assistant professor, Bapurao Deshmukh Collage of Engineering, Sevagram.

***Abstract:--***

Earlier Training and Placement Officer have to go through manual format but this system help Training and Placement Officer to match company criteria with student profile and depending upon it the students will be shortlisted. All the work regarding the placement activities is done by this system; from collecting data to shortlist the student. This system provides the facility to automated resume and simplified registration process. To generate the list of eligible students for placement. This system place the best co-ordination between teacher and student regarding campus recruitment activities. In This system the admin can conduct the mock-s test, and the according to company criteria they can short - lists the student. Student can discuss their difficulties with the departmental staff, Alumni. Notification regarding to recruitment is directly on their EMAIL and Mobile phone.

***Keywords:--***

Notification system, Automatic resume generation system, Placement, mock-test.

# A Framework for Mobile Data Collection in Energy Harvesting Wireless Sensor Network Using Distributed Algorithm

**Shaikh Gauhar Zareen**., ME, CSE, P E S College of Engineering , Aurangabad.

***Abstract:--***

Recent advances in environmental energy harvesting technologies have provided great potentials for traditional batterypoweredsensor networks to achieve perpetual operations. Due to dynamics from the temporal profiles of ambient energy sources,most of the studies so far have focused on designing and optimizing energy management schemes on single sensor node, butoverlooked the impact of spatial variations of energy distribution when sensors work together at different locations. To design a robustsensor network, in this paper, we use mobility to circumvent communication bottlenecks caused by spatial energy variations. Weemploy a mobile collector, called SenCar, to collect data from designated sensors and balance energy consumptions in the network.

To show spatial-temporal energy variations, we first conduct a case study in a solar-powered network and analyze possible impact onnetwork performance. Next, we present a two-step approach for mobile data collection. First, we adaptively select a subset of sensorlocations where the SenCar stops to collect data packets in a multi-hop fashion. We develop an adaptive algorithm to search for nodesbased on their energy and guarantee data collection tour length is bounded. Second, we focus on designing distributed algorithms toachieve maximum network utility by adjusting data rates, link scheduling, and flow routing that adapts to the spatial-temporalenvironmental energy fluctuations. Finally, our numerical results indicate the distributed algorithms can converge to optimality very fastand validate its convergence in case of node failure. We also show advantages of our framework such as it can adapt to spatialtemporalenergy variations and demonstrate its superiority compared to the network with static data sink.

# Frequency and Time domain analysis of irregular and regular building

**Sneha Rajesaheb Magar**., P.G. student of Structural Engineering, Deogiri Institute of Engineering & Management studies.
**Prof. D. H. Tupe**., Assistant Professor of Civil Engineering Department, Deogiri Institute of Engineering &Management studies
**Dr. G. R. Gandhe**., HOD of Civil Engineering Department, Deogiri Institute of Engineering &Management studies.

***Abstract:--***

The real earthquake characterization is essential for better understanding wave acceleration phenomena and the characterization of the Bhuj and Kobe subject to earthquake excitations. Results of ongoing time-frequency research are presented here with the aim to compare the performance of various state-of-the-art time-frequency distributions when applied to earthquake records to Irregular and Regular building. In a near future, the objective is to adapt this innovative joint time-frequency signal processing technique to earthquake record analysis and parameter estimation. The time-frequency distributions studied are the acceleration, velocity and Displacement. The earthquake records ranging from strong to medium soil condition, where used in this analysis. These accelerogram time series were recorded in the Kobe and Bhuj earthquake time history records applied to medium soil condition for frequency and time domain analysis. Based on our results, is our comparison between two earthquake frequency and time domain applied to Irregular and Regular shape building. The ETAB software are used to analyze the Irregular and regular building for G+15 storey.

***Keywords:--***

Irregular Building, Regular building, Etab Sotware, Bhuj and Kobe time history records, Frequency and Time domain analysis.

# Solar irrigation by using booster

**Shubham Patil**., Sanjay Ghodawat Institutes, Atigre, Kolhapur.

***Abstract:--***

India is an agricultural based country. So farmers play an important role in our country. They require sufficient water for the irrigation purpose. But in rural areas availability of power supply is not guaranteed. So now we are focusing on energy generation by renewable sources. As we are focusing on renewable sources there is an opportunity to power irrigation systems with solar energy. It is a reliable and environmentally sustainable option. Therefore for producing energy solar energy might be one of the practicable and effective ways for farmers. So use of solar energy for irrigation purpose is a reliable alternative to conventional electricity for irrigation.

For solar irrigation system, we need to measure surrounding temperature. To develop a local and low cost solar irrigation system is the main objective of this project. Use of proper method of irrigation is important because the main reason is the less rainfall and unavailability of land for reservoir of water. Another important reason is waste of water due to unplanned use of water. For improving the farm productivity there is a need to develop local solar irrigation system. The system is powered by solar system as a renewable energy as it converts sunlight into electricity. The solar panel targets the radiation from sun. The main circuit consists of solar panel, booster, inverter, induction motor, and pump and storage tank.

# Implicit and explicit Association-Based Feature Opinion mining Framework

**Sonali Pardeshi**., Department of Computer Science and Engineering Marthawada Shikshan Prasark Mandal's Deogiri Institute of Engineering & Management Studies, Aurangabad Maharashtra state, India

**Ms. Sugandha Nandedkar**., Associate Professor Department of Computer Science and Engineering Marthawada Shikshan Prasark Mandal's Deogiri Institute of Engineering & Management Studies, Aurangabad Maharashtra state, India.

***Abstract:--***

Significant advancement in e-commerce has led to the invention of several websites selling products online. These websites also facilitate the buyers to express their opinions about the products & their features in the form of reviews. Knowing these opinions and the related sentiments plays an important role in decision making processes involving regular customers to executive managers. But these reviews are available in huge numbers hence referring them becomes a practically impossible task to achieve. Thus a new orientation called Opinion Mining & Summarization has emerged to deal with the problem. Aspect-based (Feature-based) Opinion Summarization is one of these summarization techniques which provide brief yet most relevant information about different features related to the target product. Hence the approach is in great demand nowadays because it exactly shows what a customer usually tries to search while referring the reviews. This paper focuses on extraction of different kinds of features associated with a target entity. Current state of the art suggests that concrete techniques are highly required for identification of those features which are not clearly mentioned. Thus our prime target is to deliver a succinct solution for effective identification of implicit features along with the explicit ones based on the opinion words encountered in user reviews. This is achieved by first extracting and processing the explicit features and then using them for the identification of implicit features. Finally summarization of sentences containing both kinds of aspects is done.

***Keywords: --***

Opinion mining, feature, implicit feature, explicit feature, opinion word, association.

# Microcontroller based smart callibration meter

**Prof. P. D. More**., Department of Electrical Engineering, Sanjay Ghodawat Institute, Atigre.
**VaibhavChougule**., Department of Electrical Engineering, Sanjay Ghodawat Institute, Atigre.
**ShubhamPowar**., Department of Electrical Engineering, Sanjay Ghodawat Institute, Atigre.
**VikasJadhav**., Department of Electrical Engineering, Sanjay Ghodawat Institute, Atigre.
**SuhasRedekar**., Department of Electrical Engineering, Sanjay Ghodawat Institute, Atigre.
**AkshayPatil**., Department of Electrical Engineering, Sanjay Ghodawat Institute, Atigre

***Abstract:--***

The proposed system is based on the concept of calibration which include calibration of ac voltmeter, ac ammeter, wattmeter, energy meter. The working of this system can be divided into three sections such as controller section, metering section and display section. In order to maintain the precision of a device we need to do the calibration. Thus to minimize the factors that causes the faulty reading is the fundamental aspect of our instrumentation design. So by calibrating the meter after specific interval of time we can secure the acceptable range of that instrument. We know that the process of calibration is done only at industrial level. But in small scale industries and in the educational level we use un-calibrated devices which causes inaccurate reading. The most inherent part of our measuring system is that, we have to use the different meters to calibrate respective quantities, Because of that the size and cost of meter increases. So in order to overcome these all demerits we have designed a system which helps to calibrate the voltage, current, power and active energy using a standard meter with high precision. And the most important part of our meter is that we can use it at small scale level also to increase the accuracy of the instrument.

***Keywords:--***

calibration, error, voltage, current, power, energy, microcontroller.

# Material Considerations for Repairs and Rehabilitations of Structure: An effective factor in reshaping Architectural Character

**Ar. Swapna Ashok Dhavale.,** Assistant Professor, Dept. of Arch, MIT, Aurangabad
**Ar. Leena Prasad Aphale**., Assistant Professor, Dept. of Arch, MIT, Aurangabad.

***Abstract:--***

All the Buildings and structures constructed over a period of time have a certain life span, depending on the materials and technology adopted therein. There are large numbers of buildings which are to be cherished as important structures in various aspects which have stood well over a period of time. The aspects may vary from being heritage, civic or simply being a distinct master piece of a particular era. Many of these buildings in course of time exhibit a sign of distress. The reason for this distress may vary. It may be due to its age, exposure to hostile natural environment, pollution or sheer negligence in its maintaince or misuse and overloading of the structure etc.

Repair and Rehabilitation is defined as the process of achieving the original state of structure when it undergoes any sort of defects or deterioration or destruction. Repair and Rehabilitation is an Art work, which not only extends the life of a structure but also ensures that the structure stays intact exhibiting the character of the construction and architecture of a particular era. Restoration of structure is an ultimate aim of Repair and Rehabilitation, Restoring the structural as well as design character of the building. Architectural identity of any structure is governed by the choice of materials and techniques adopted, which have been unique to that period. Hence it becomes obvious that due consideration shall be given in selecting not only suitable but relevant materials for Repair and Restoration works of such structures. However in due course of time, in the process of this restoration the focus remains on the strength of the material unconsciously neglecting the architectural character governed by that material. This paper throws light on the facts that due consideration to be given on this aspect of material selection, in the Repairs and Rehabilitations process. It put forth an urge that selection of Materials for Repairs and Rehabilitations of Structure plays an important role in reshaping the Architectural Character of a particular era

***Keywords:--***

Materials, Repairs and Rehabilitations, Architectural Character.

# Study of Light intensity in the Environment by using PSOC1

**V. T. Kulkarni**., Sivchhatrapati College, Aurangabad.
**M. N. Kumawat**., Deogiri College, Aurangabad.
**S. N. Helambe** ., Deogiri College, Aurangabad.

***Abstract:--***

The measurement of the meteorological parameters is very important in many areas like industry, framing, and weather forecasting to analyze a data for predict the results. Measuring light intensity is important when designing a room's lighting or preparing for a photograph. The term "intensity" is used in different ways, so take a moment to learn what units and measuring methods match the goals. This research paper describes ambient light measurement with a new advanced, low cost, portable embedded system fabricated through flexibility and ease of designing created by programmable system on chip controllers. The designed system uses the dynamic reconfiguration ability of PSoC and the provided pre-packaged libraries to connect conveniently multiple weather parameter sensors on a single chip.

***Keywords:--***

LDR, LUX, PSoC- Programmable System on Chip.

# Analysis of Impact of Emotion on Performance

**Y.H.Gulhane**., Research Student, Dept of ECE, Sant Gadge Baba Amravati University.
**Dr.S.A.Ladhake**., Principal Of Sipna College Of Engineering And Technology.

***Abstract:--***

Emotions and physiology of the human does the major impact on the performance of goal. Two categories of emotion are considered to study and analysis of impact of emotion that are positive emotion and negative emotions. Energy-in –Motion is also knows as emotion. Change in lifestyle of new generation pulled in a dilemma of decision making also has not a mental and physical strength to face and handle the emotional phases . Right actions at right time can pull out them from the stress. This motivates me to contribute my work in area of Speech signal processing for biomedical application. For our research work we tried to build a system 'Analysis of impact of emotion on performance'. This can help to detect and classify the emotions. Anger, Sadness and the Natural are the base factors for the stress analysis. Anger again classified as Aggressive anger and Depressive anger. Similarly Sadness also classified as Aggressive sadness and Depressive Sadness performance measurement of the stress analysis system is its accuracy of recognition. Using signature base approach of audio feature classification we designed the system and results are compare with existing tools and technology .This Analysis showed that stress affect negatively 10% on performance of the student as compare to normal performance.

***Keywords:--***

Stress, Emotions, Classification, Detection, Signal Processing.

# Precipitation intensity-duration-frequency curves under changing climate - Aurangabad (MS), India.

**Akram Salim Pathan**., Assistant Professor, Dept.of Civil Engineering, Deogiri Institute of engineering and Management Studies, Aurangabad (Maharashtra), India.

**Momin Noman**., UG students, Dept.of Civil Engineering, Deogiri Institute of engineering and Management Studies, Aurangabad (Maharashtra), India.

**A.Q.Khan**., UG students, Dept.of Civil Engineering, Deogiri Institute of engineering and Management Studies, Aurangabad (Maharashtra), India.

**Mohammed Shaikh**., UG students, Dept.of Civil Engineering, Deogiri Institute of engineering and Management Studies, Aurangabad (Maharashtra), India.

**Naveed Shaikh**., UG students, Dept.of Civil Engineering, Deogiri Institute of engineering and Management Studies, Aurangabad (Maharashtra), India.

***Abstract:--***

Storm water plays an important role in analysis, design and planning of storm water drains in case of rapidly growing urbanization. The change in rainfall pattern and intensity is becoming a great concern for hydrologic engineers and planners. The rainfall Intensity-Duration-Frequency (IDF) curves are commonly used in storm water management and other engineering design applications across the world and these curves are developed based on historical rainfall time series data by fitting a theoretical probability distribution to extreme rainfall series. In recent years, it has been widely reorganized that the extreme precipitation events are increasing due to global climate change. In addition, due to population and property concentration in relatively small areas, the flood damage potential in urban areas is high and the extreme rainfall events are the main cause for urban floods. Therefore, it is important to study the climate change impacts on rainfall IDF curves of an urban area. In this study, with the help of five Global Climate(GCMs) simulations and 'K' Nearest Neighbor(KNN) weather generator based downscaling method, the impacts of climate change on rainfall IDF curves of Shendra (DMIC) Aurangabad (MS), India are studied. Results of this study indicate that the climate change is increasing extreme rainfall events of Shendra (DMIC) Aurangabad. In addition, it is also observed that the return of period of an extreme rainfall of the Shendra (DMIC) Aurangabad is reducing.

# Sign Language Recognition Systems: A Review

**Anita S.Walde**., Research Scholar, DIEMS, Aurangabad.
**Dr.Ulhas D. Shiurkar**., Director, DIEMS, Aurangabad.

***Abstract:--***

The significant intention of this paper is to review some important issues related to the deaf people. These include Sign language, Sign language in India, Research work carried out in last twenty years and a brief comparison of major steps associated with the sign language recognition system. The survey examine vision based sign language recognition system in terms of i)Segmentation, ii)Feature extraction technique, iii) classifier/recognition technique, iv) Accuracy achieved and v) sign language considered, and glove based sign language recognition systems . This paper also highlights on strengths and limitations of sign language learning packages.

***Index Terms:--***

Vision based sign language recognition, Glove based sign language recognition, Sign language learning packages.

# Behavioral model to obtain profit with guaranteed quality of service in cloud computing.

**Anjali C.Tak**., M.E Student, Computer Science, Matsyodari Shikshan Sanstha's College of Engineering and Technology, Jalna, Aurangabad.

**Prof. S.R.Ghungrad**., Professor, Computer Science, Matsyodari Shikshan Sanstha's College of Engineering and Technology, Jalna, Aurangabad.

***Abstract:--***

As an effective and efficient way to provide our customers with IT resources and services, Cloud Computing is gaining in popularity. From a cloud provider perspective, profit is the most important consideration and is determined by configuring a cloud service platform based on market demand. However, a one-time leasing system is often used to configure the cloud platform, which can not guarantee the quality of the service. However, it results in severe resource losses. In this article, the dual sourcing system is pre-designed by short-term rentals and long-term lease agreements are combined to target existing issues. This dual-leased system can effectively guarantee the quality of service provided by all applications and greatly reduce resource wastage. Second, the service system is considered to be a queuing model of M / M / m + D, and performance metrics that affect the benefits of our dual lease system, such as average load, requested ratio, temporary server requirements, and more. Third, the problem of maximizing profits is that the formula for the dual lease plan and the optimal configuration of the cloud platform are obtained by solving the problem. These maximize profit Finally, this is calculated to compare the benefits of our service plan with a one-time rental plan. Experimental results show that our system provides not only service quality of for all applications but it also gets more profit than the latter system.

***Keywords:--***

Cloud computing, guaranteed quality of service, multi-server system, profit maximization, queuing model, service level agreement.

# Text analytics on different corpus data for Multilingual System

**Arjumand Masood Khan**., Assistant Professor at Government College of Engineering Aurangabad
**Dr. Rahat Afreen**., Associate Professor at Deogiri Institute of Management Studies, Aurangabad
**Dr. Meghana Nagori**., Assistant Professor at Government College of Engineering Aurangabad

***Abstract:--***

Natural language processing (or Computational linguistic) is becoming the need of today's world. The field of Text Analytics, comprising of Natural Language Processing unite as a whole with Machine Learning and Data Mining. They have also evolved the years to keep pace with the rapid increase of novel sources of corpus data. The main challenges faces nowadays is analysis from text in a multilingual setting e.g. (English Arabic) or (English Urdu). Natural language processing and Text Analytics methods are increasingly being adopted , developed and distributed for addressing a wide ways of real-life, industrial problems ,teaching learning process globally . Arabic is one of the major language spoken and used by many people of gulf countries and United Nations. More than 330 million in more than 22 countries people's mother tongue is Arabic/Urdu. Arabic is also one of the language of Holy Quran.

***Keywords:--***

Natural language processing, Text Analytics, Arabic NLP, Urdu NLP, NLTK, corpus.

# Smart Blind Stick for Visually impaired people by using IoT

**Ms. Ashwini S. Gaikwad**., Assistant Professor, Computer Science and Engineering Department, Deogiri Institite of Engineering and Management studies, Aurangabad.

**Ms. Rasika L. Dahibhate**., Third year Computer Science and Engineering Department, Deogiri Institite of Engineering and Management studies, Aurangabad.

**Satyam D. Burhade**., Third year Computer Science and Engineering Department, Deogiri Institite of Engineering and Management studies, Aurangabad.

***Abstract:--***

Visually impaired people cannot identify any object by their eyes. They cannot do any kind of work without taking support of another person or an object. Usually blind people use stick to judge the path or object or anything. This paper proposes a technique for creating a smart blind stick for visually impaired people through which they can be aware for the upcoming obstacles. The proposed method uses ultrasonic sensor, arduino UNO board, buzzer and bread board through which the stick can identify the obstacles. The aim of this paper is to develop a smart blind stick for blind peoples in affordable price. This system will help blind people to go anywhere without getting help of any other person. Through this system, blind person will be aware about the obstacles. This study provides an approach that can avoid the chances of accidents.

***Keyword: -***

Ultrasonic sensor, Arduino UNO board, Buzzer & Bread board.

# A Review Paper on Facial Expression Recognition: Atlas Construction and Sparse Representation

**Ashwini S. Sugave**., Student, ME IInd year Department of Computer Science and Engineering, Deogiri Institute of Engineering & Management Studies, Aurangabad

**Ashwini Gaikwad**., Assistant Professor, Department of Computer Science and Engineering , Deogiri Institute of Engineering & Management Studies, Aurangabad

***Abstract:--***

Human face can exhibits complex and strong changes that are both unpredictable and varying in time. Now a days, facial expression recognition has become a emerging and research topic due to advancement in this field. In this paper, we study about many facial expression techniques, but these two techniques are most utilized for facial expression recognition. In existing method atlases are constructed using conventional group-wise registration method due to which lot of subtle and important information lost. To overcome this limitation sparse based atlas construction method and Spatio-temporal information are represented for better performance in recognition process. This paper presents a quick survey of facial expression recognition.

**26th -27th February 2018** **ICTIEM – 18** **ISBN: 978-81-932966-8-4**

***Organized by:***

**Deogiri Institute of Engineering and Management Studies**

***And***

**Institute For Engineering Research and Publication (IFERP)**

# Integrated Approach for Groundwater Potential of Jhod Macro-Watershed in Nanded District, Maharashtra, India

**Bhagwan B. Ghute**., Assistant Professor, Department of Geology, Toshniwal ACS College, Sengaon Dist: Hingoli 431542 (M.S.) India

***Abstract:--***

The study area belongs to the Deccan trap basalts of late Cretaceous to early Eocene period. The groundwater in the study area is restricted mostly to the zones of secondary porosity developed due to fractures, joints, and weathering. In the present study, an attempt has been made to evaluate the geomorphic stages of the Jhod macro-watershed. The present study also attempts to select suitable geomorphic surfaces and morphometric attributes for groundwater exploration in hard rock areas especially Deccan basalt. Morphometric characteristics play a vital role on the hydrologic performance of the drainage basin. Hence, a number of parameters, which signify the drainage basin characteristics, such as bifurcation ratio, length and area ratios, basin configurations, drainage density, stream frequency, and the length of overland flow, are evaluated for the present study. The groundwater potentiality is moderate to good (with average yield 240 to 280 lpm in bore wells), in most part of the watershed, whereas the fractured zones in the weathered pediplains and alluvial plains are very good potential zones (with average yield >240 lpm in bore wells). The pediment surfaces are having moderate to poor groundwater potentiality, i.e. average yield 78 lpm in dug wells and 145 lpm in bore wells. Highly dissected plateau have the poor groundwater potentiality with average yield of 65 lpm in dug wells and 94 lpm in bore wells.

***Keywords:--***

Pediplain, Bifurcation ratio, Macro-Watershed, Pediment.

# Use of ICT Tools Among Graduate Housewives

**Chandrakant Ramrao Phad**., Asst. Professor, Deogiri Institute of Engineering & Management Studies, Aurangabad
**Roger Anil Ingles**., Asst. Professor, Deogiri Institute of Engineering & Management Studies, Aurangabad

***Abstract:--***

Today's world belongs to the era of information explosion. With the information edge on hand, the world is getting much competitive. Information and Communication Technologies comprise a complex and heterogeneous set of goods, applications and services used to produce, process, distribute and transform information. It also consists of segments as diverse as telecommunications, television and radio broadcasting, computer hardware, software and services and electronic media, for example, the internet and electronic mail. Traditional technologies continue to be important for large numbers of people around the world, whether they are male or female, married or unmarried, young or adult. The objective of this paper to analyze the use of ICT tools for different objectives among married females who are graduate and also are house wives. Primary data was gathered from different parts of Aurangabad city by using a structured questionnaire. There was no constraint on age. Convenient sampling technique was used and over 500 graduate housewives were analyzed. It was found from the analysis that the housewives use ICT tools for social networking, for learning, for financial purpose, they does online shopping using cash on delivery as a major payment option. It was also found that more than 80% of housewives use smart phones as medium. It was concluded from the study that being so busy in the daily work the respondent takes out time for using ICT tools.

***Keywords:--***

Graduate Housewives, Information Communication and Technology (ICT)

# Analytical Study on Awareness of Individual Investor for Investment Planning

**Dinesh Kalani**., Deogiri Institute of Engineering and Management Studies, Aurangabad.
**Prof. Feeroj Pathan**., Deogiri Institute of Engineering and Management Studies, Aurangabad.
**Prof. Rupesh Rebba**., HOD, Management Studies, Deogiri Institute of Engineering and Management Studies, Aurangabad.

***Abstract:--***

Cognitive radio networks are addressing the spectrum scarcity problem by allowing secondary users to utilize licensed spectrum for their work. Spectrum handover is a technique through which dynamic usage of spectrum is possible. But excess of spectrum handovers causes degradation in performance of the secondary user. Spectrum handover has an unfavourable effect on the link maintenance of secondary user. In this paper, Dynamic Spectrum Access using unlicensed channels as Backup channels (DSAB) technique is used for decreasing performance degradation caused by excess of spectrum handovers in cognitive radio ad hoc networks. A mathematical model is proposed to appraise the performance of DSAB in terms of two measures: link maintenance probability, expected number of spectrum handovers. Performance evaluation of DSAB shows an advancement in two measures of performance.

***Keywords:--***

Investor, Investment planning, Survey, Analytical study.

# Analysis of Thick Isotropic Beam Using Trigonometric Shear Deformation Theory

**D.H.Tupe**., Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad (M.S)-431005, India.

**A.G.Dahake**., Associate Professor, Department of Civil Engineering, Marathwada Institute of Engineering, Aurangabad (M.S)-431005, India.

***Abstract:--***

In the present study, a trigonometric shear deforma-tion theory is developed for static exural analysis of thick isotropic beams. The number of variables in the present theory is same as that in the rst order shear deformation theory. In this theory the the sinusoidal function is used in displacement eld in terms of thickness coordinate to represent the shear deformation e ect and satisfy the zero transverse shear stress condition at top and bottom surface of the beams. The Governing di erential equation and boundary conditions of the theory are obtained by using Principle of virtual work. The xed isotropic beam subjected to varying load is examined using present theory. The numerical results have been computed for various lengths to thickness ratios of the beams and the results obtained are compared with those of Elementary, Timoshenko, trigonomet-ric and other higher order re ned theories and with the available solution in the literature.

# "Testing the Weak Form of Efficiency of the Indian Stock Market"

**Mr. Feeroj N. Pathan**., Asst. Prof. DIEMS, Aurangabad.
**Mr. Rupesh Rebba**., Asst. Prof. DIEMS, Aurangabad.
**Mr. Bharat Pawar**., Asst. Prof. DIEMS, Aurangabad.

***Abstract:--***

The leading stock exchange of India BSE & NSE attracts the attention of researchers and analysts in view of recent fluctuations in investments levels and the global financial disorder. The efficiency tests conducted till now have produced contradictory results therefore it is difficult to comment on Indian stock market efficiency. So researchers found it interesting to examine the impact of various macro-economic factors on Indian stock market. Stock market efficiency is one of the important parameter to measure the efficiency of a financial system and especially in developing countries like India. In efficient markets all transactions are done with the help of new information available about the economy, industries and companies.

This paper therefore is an attempt to seek evidence by using the monthly data for stock indices of the Bombay Stock Exchange & National Stock Exchange for the period of January 2008 to Jan 2018.

***Keywords:--***

Market efficiency, Efficient market Hypothesis (EMH), Weak form market efficiency, Semi strong form, Strong form market efficiency.

# Role of Talent Management in influencing Employee Engagement and building Sustainable Competitive Advantage

**Dr.Jyoti Munde**., Asst. Prof. Deogiri Institute of Engineering and Management Studies, Aurangabad
**Dr.Gurpreet Attal**., Asst. Prof. Deogiri Institute of Engineering and Management Studies, Aurangabad
**Raman Karde**., Asst. Prof. Deogiri Institute of Engineering and Management Studies, Aurangabad

***Abstract:--***

Talent Management is effective Human Resource tool for firms in today's competitive era. Employee Engagement is an essential element in talent management which drives towards business excellence. Talent Management and Employee engagement are linked such that Talent Management is vital to engaging employees in the organization. Today firms are facing challenge of not only retaining talent but also fully engaging them at each stage of their work lives. So it is must for the organizations to focus on Talent Management initiatives which will not only capture employee's mind but also their heart. This is conceptual literature review based paper which explores strength of talent management in influencing employee engagement for building sustainable competitive advantage for organization.

***Keywords:--***

Talent Management, Employee Engagement, Sustainable Competitive Advantage

# High Power High efficiency GaN Class E Power amplifier for Commercial Defence

**Anil Birajdar**., Faculty(ETC), Deogiri Institute of Engineering and Management Studies, Aurangabad

***Abstract:--***

In this paper a class E power amplifier in GaN on SiC HEMT process with high efficiency for Commercial Defence application is presented. The proposed class E amplifier in 3-3.5 GHz band delivers 130-165 W output power with power added efficiency better than 60% and drain efficiency better than 65%. Proposed PA demonstrates a large signal gain of 12 dB at 1 dB compression point. These results are verified by harmonic balance simulations.

# Women's Perception about Workplace Day Care Center

**Khan Rushina**., Asst. Prof. Deogiri Institute of Engineering and Management Studies, Aurangabad
**Medha Kulkarni**., Asst. Prof. Deogiri Institute of Engineering and Management Studies, Aurangabad
**Vaibhav Vasundekar**., Asst. Prof. Deogiri Institute of Engineering and Management Studies, Aurangabad

***Abstract:--***

Until modern times, lack of education and few cultural practices restricted women to enter workforce. But today's world is highly competitive and women are equally participating in the workforce. Government is also taking efforts to bring more women in the workforce. As a result the rate of women workforce is increasing day by day.

A female employee's responsibility gets manifold when she gives birth to a child and the responsibility increases if she is a working woman. One such problem of employees' personal lives is about child rearing paper focuses on offering of childcare at workplace. Education is one such sector where we find majority of women making a career. Hence it is the duty of employer to take care of their needs especially when it comes to child birth and their upbringing.

Law has made provisions of providing a workplace day care centre in manufacturing sector. But there is no such provision for education sector. The following research study has been done at different schools and colleges of Aurangabad city to know the women's perception about having a workplace day care centre at their respective schools & colleges.

***Keywords:--***

childcare, day care centre, productivity, perception, workforce

# Palm Recognition Using Opencv on BeagleBoard Xm: DM3730

**Prof. Khushi Diccar**., Electronics and Tele Communication Department, Deogiri Institute of Engineering & Management Studies, Aurangabad, India

***Abstract:--***

The palm print is a new and emerging biometric feature for personal recognition. The system provides basic idea about palm print recognition using opencv libraries, principal component analysis (PCA) algorithm and Beagleboard xm: DM3730 platform, Opencv library is having rich functionality for image processing. The results of the experiments show the efficiency of the palm recognition system is 78% for 0.00 matching confidence threshold.

***Keywords:--***

Biometric; PCA; Harr Cascade classifier

# Experimental study of concrete made by partial replacement of coarse aggregate with composite mix of coconut shell and crumb rubber

**Ms. Snehal B. Gurule**., Student, Department of Civil Engineering, Guru Gobind Singh Polytechnic, Nashik, India.
**Ms. Amrapali G. Lokhande**., Student, Department of Civil Engineering, Guru Gobind Singh Polytechnic, Nashik, India.
**Ms Archana M. Jadhav**., Student, Department of Civil Engineering, Guru Gobind Singh Polytechnic, Nashik, India.
**Ms. Nandini V. Patil**., Student, Department of Civil Engineering, Guru Gobind Singh Polytechnic, Nashik, India.
**Ms. Komal D Nikumbh**., Student, Department of Civil Engineering, Guru Gobind Singh Polytechnic, Nashik, India.

***Abstract:--***

In construction Industry Rising Cost of Construction Material is the Great factor. the pprice of building material are rising day by day therefore these is the most priority of all human beings enchorage or research on sustainable material will help to use such waste material as a construction material with less cost and safety of structure. The coarse aggregate is the main constituent of test results. The use of coconut shell can also help the prevention of the environment. The paper aims at analyzing compressive strength of concrete (M20-1:1.5:3) produced using coconut shell as substitute for conventional coarse aggregate with 5% ,10% ,15 %, 20% partial replacement. Three sample cubes are prepared for M20 grade concrete mix for each case another aim of this paper is to spread awareness about use of coconut shell as construction material in civil engineering Concrete is most widely used building material in the world, as well as the largest user of natural resources with annual consumption of 12.6 billion tons. Basically it consists of aggregates which are bonded together by cement and water. The major part of concrete besides the cement is the aggregate. Aggregate include sand and crushed stone / Gravel . Use of these conventional materials in concrete is likely to deplete the resources unless there is a suitable substitute. Rubber which is generated in large quantities as waste does not have useful disposal till now. But rubber is found to possess properties that are required for viable replacement of fine aggregate in concrete. Hence we in this project have aimed to study the effectiveness of rubber as substitute for fine aggregate and utilize the crumb rubber tyres in concrete, to minimize global warming.

***Keywords:--***

Crumb Rubber, Coconut Shell, Compressive Strength, Splitting Tensile Strength, Flexural Strength, Coarse Aggregate, Construction Material, Waste Utilization

# Implementation of Demand Side Energy Monitoring on Tod Basis Using Lab view

**Mahek Insha Tarannum**., M.E Student, Electronics and TeleCommunication, DIEMS,Aurangabad.
**Prof. S. A. Shaikh**., Assistant Professor, Electronics and TeleCommunication, DIEMS, Aurangabad.

***Abstract:--***

Electricity is very essential for economical growth of country and growth is linked to the energy availability. The gap between demand and the supply is rapidly increasing. For Monitoring the quantity of energy used at specific times to reduce system peak demand, load leveling, balance system supply and demand, Energy efficiency, and to reduce overall system demand. This paper basically describes the demand side energy monitoring on TOD basis using LabVIEW. In this paper LabVIEW uses the concept of Time of Day (TOD) metering to check the usage of electricity and the time of use. Demand Side Energy Monitoring system measure which is used as a means of incentivizing consumers to shift a portion of their loads from peak times to off-peak times, thereby improving the system load factor by reducing the demand on the system during peak period.

***Keywords:--***

TOD, LabVIEW, ZigBee, EEM, GUI.

# IOT Based Data Monitoring and Controlling Of Oil Skimmer for CNC Machine

**Manisha V. Kakde**., P.G. Student, Department of Electronics and Telecommunication, Deogiri Institute of Engineering and Management Studies, Aurangabad (MS), India.

**A.R.Wadhekar**., Assistant Professor, Department of Electronics and Telecommunication, Deogiri Institute of Engineering and Management Studies, Aurangabad (MS), India

***Abstract:--***

Machine coolant and cutting oils become unusable when they become contaminated with bacteria, tramp oil, metal fines, or wastes. They can break down from use but, water based is most commonly Brocken down by bacteria growing in the system due to trap oil. All the unwanted oils which flow with coolant and get collected in coolant tanks are called as tramp oil. A skimmer is a device that collects and removes tramp oil from the surface of the water or coolant.This project helps to control and monitor the oil skimmer with IAS (Intelligent Automatic System) based on PH level. For this we are using Arduino, PH Sensor, Temperature sensor, Ethernet shield controller, LCD is used to display PH and temperature level. PH status is updated to the server or local host using Personal Computer.

***Keywords:--***

Intelligent Automatic System; Ethernet Shield; PH Sensor; temperature sensor; IOT; Android.

# Use of Ferrocement as a Permanent Formwork for Beams

**Mohd Adnan**., U.G.Students, Deogiri Institute of Engineering and Management Studies, Aurangabad.
**Kotkar Aadil Khan**., U.G.Students, Deogiri Institute of Engineering and Management Studies, Aurangabad.
**Md Gause**., U.G.Students, Deogiri Institute of Engineering and Management Studies, Aurangabad.
**Albir Singh Jabinda**., U.G.Students, Deogiri Institute of Engineering and Management Studies, Aurangabad.
**K.G.Patwari**., Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad. 431005.

***Abstract:--***

Ferrocement is introduced by P L Nervi an Italian architect and engineer in 1940. Ferrocement has increased applications due to its properties such as strength, toughness, water tightness, lightness, ductility and environmental stability. Ferrocement can be fabricated in to any desired shape or structural configuration that is generally not possible with standard masonry, reinforced concrete or steel.

Temporary wooden or steel formworks are used nowadays for most of the concrete constructions. Since the cost of such formworks is a critical issue in the construction field. Hence it is essential to suggest an alternative material and technology for the formwork construction to replace the conventional materials and to reduce the cost. This study investigates the effectiveness of using ferrocement as a permanent formwork for the beams which are reinforced with single and double layers of chicken mesh. And this will also prevent the destruction of woods in many cases and hence the country will be benefited to a great extent. Therefore, this research work investigates the possibility of using such a versatile material as a permanent formwork for reinforced concrete beams.

***Keywords:--***

Chicken mesh, ferrocement, formwork, reinforced concrete

# A Study of Trend Analysis Using LDA and Information Filtering

**Nisha K. Lagad**., Deogiri Institute of Engineering and Management Studies, Aurangabad.
**Padmapani P.Tribhuvan**., Deogiri Institute of Engineering and Management Studies, Aurangabad.

***Abstract:--***

Term and pattern related approaches are used in information filtering. These approaches are used for generating users information needs from a large amount of documents. A prediction for these techniques is the documents in collection are all about same topic. However, in reality users' interests can be diverse and the documents in the collection often involve multiple topics. Topic modelling, such as Latent Dirichlet Allocation is given to generate statistical models to represent multiple topics in a collection of documents, and this has been widely utilized in the fields of machine learning and information retrieval. Patterns are always thought to be more discriminative than single terms and words for describing documents. However, the large amount of discovered patterns hinder them from being effectively used in real time applications, therefore the selection of the most discriminative patterns from the number of discovered patterns becomes crucial.

**26th -27th February 2018** **ICTIEM – 18** **ISBN: 978-81-932966-8-4**

***Organized by:***
**Deogiri Institute of Engineering and Management Studies**
***And***
**Institute For Engineering Research and Publication (IFERP)**

# Ensemble Learning as Opinion Mining Approach: A Survey

**Padmapani P. Tribhuvan**., DIEMS, Aurangabad.
**Sunil G. Bhirud**., VJTI, Mumbai.
**Ratnadeep R. Deshmukh**., Dr. B.A.M.U., Aurangabad.

***Abstract:--***

User generated data on web has many research challenges and thus has attracted many researchers. As result, many new disciplines are evolved and opinion mining is one of them. Opinion mining deals with reviews expressed on web. Opinion mining analyses views, sentiments, opinions, attitudes and emotions expressed in reviews. There are different approaches to solve the problem of opinion mining. Ensemble learning is one of the paradigms of machine learning in which multiple learners are used to solve the same problem. It has been used in different types of application efficiently and effectively. In the discipline of opinion mining, different ensembles are proposed by researchers. This survey focuses on opinion mining using ensemble learning approach. We discussed different ensembles used to solve problem of opinion mining.

***Index Terms:--***

Aspect Level Sentiment Analysis, Ensemble Learning, Feature Based Opinion Mining, Machine Learning, Opinion Mining, Sentiment Classification Sentiment Analysis

# Flow Dynamics around Tandem Cylinders with Different Longitudinal Gaps

**Deep Pandya**., Mechanical Engineering, Marwadi Education Foundation Group of Institutions, Rajkot, India
**Atal Harichandan**., Mechanical Engineering, Marwadi Education Foundation Group of Institutions, Rajkot, India

***Abstract:--***

Dynamics of flow around three circular cylinders in tandem arrangement has been investigated. Finite volume method has been employed to perform the simulations with high accuracy at Reynolds numbers Re = 100 and Re = 200. A consistent flux reconstruction scheme is considered for the explicit calculation of the primitive variables in flow domain. Due to the complexity of flow geometry, unstructured grids with triangular cells are employed for numerical simulations. The influence of longitudinal gaps (L = 2D and L = 3D) between cylinders upon flow characteristics are estimated. Streamlines and vorticity contours along with periodic variation of lift and drag coefficients are discussed for each cylinder in the tandem configuration. The downstream cylinder in the configuration experiences very large unsteady forces that can give rise to wake-induced flutter. Also, with increase in the longitudinal gap, flow separation or reattachment of shear layer from the upstream cylinder to the immediate downstream cylinder are not observed. In tandem arrangement of cylinders, the flow field behind the downstream cylinder develops from steady state into an unsteady state as Reynolds number increases.

***Index Terms:--***

Flow dynamics; finite volume method, tandem arrangement; longitudinal gap, vorticity contours, streamlines

# Text to Sign Language Conversion by Using Python and Database of Images and Videos

**Pooja Balu Sonawane**., Department of Electronics and Telecommunication Engineering Marathwada Shikshan Prasarak Mandal's Deogiri Institute of Engineering & Management Studies, Aurangabad Maharashtra State, India.

**Prof. Anita Nikalje**., Assistant Professor, Department of Electronics and Telecommunication Engineering Marathwada Shikshan Prasarak Mandal's Deogiri Institute of Engineering & Management Studies, Aurangabad Maharashtra state, India.

***Abstract:--***

The aim of this system is to design independent communication system for a person who are deaf and hard of hearing. This system is used for converting text to sign language. It is the vision based system. It takes input as alphabets and numerals and converts them into equivalent sign code and displays on a screen. In this system we are going to used Indian sign language. Sign language is not same for all part of the world. Sign language is defined as the language of deaf and dumb people by using which they are able to express their thoughts. By using sign language they can transmit messages by combining hand shapes and different movement of hands. Sign language has their own alphabets and grammar. By creating a system that convert text to sign code, which is helpful for communication between normal people and hard of hearing person..

***Index Terms:--***

Python, Raspberry Pi, Input device, HDMI Display.

# Overview of Background Subtraction Algorithms

**Prachi A. Joshi**., Deogiri Institute of Engineering & Management Studies.
**Dr.R.A.Khan**., Deogiri Institute of Engineering & Management Studies.
**S.C.Nandedkar**., Deogiri Institute of Engineering & Management Studies.

***Abstract:--***

Understanding the human activity from video is proved to be important research area in computer vision since last few years. Background subtraction is a widely used technique for detecting moving objects in videos from static cameras. This approach is said to be fast way of localizing moving objects in a video frame shot by static camera which can be used for various computer vision applications. The mentioned technique is used for calculating the foreground mask performing a subtraction between the current frame and a background model, containing the static part of the scene. Here regions of interest are objects like humans, cars, text etc. in its foreground. The objective here is of detecting the moving objects from the difference between the current frame and a reference frame, frequently called as background model or image. Background subtraction algorithms are more popular now days because of its computational efficiency in applications like video surveillance, traffic monitoring, human computer interaction etc. The conditions like moving background, temporarily stationary objects, objects shadows, illumination variation can affect the background subtraction. This paper focuses on comparative study of different background subtraction algorithms.

***Index Terms:--***

Background Subtraction, Human Computer Interaction, Object Detection, Regions of interest, Traffic Monitoring, Video Surveillance, Frame Difference, Mean Filter, Approximate Median Filter, Mixture of Gaussian Model, Running Gaussian Average.

# Stabilazation of Concrete by Using Geopolymer

**Pradeep Bhalerao**., UG Students, Civil Engineering Department, DIEMS, Aurangabad (M.S.)
**Mahesh Raut**., UG Students, Civil Engineering Department, DIEMS, Aurangabad (M.S.)
**Sagar Jadhav**., UG Students, Civil Engineering Department, DIEMS, Aurangabad (M.S.)
**Vikas Salgar**., UG Students, Civil Engineering Department, DIEMS, Aurangabad (M.S.)
**S.B Deshmukh**., Assistant Professor, Civil Engineering Department, DIEMS, Aurangabad (M.S.)
**S.B. Kapse**., Assistant Professor, Civil Engineering Department, DIEMS, Aurangabad (M.S.)

***Abstract:--***

The Present study is based on the investigation of the use of polymer thread and Geofoam in concrete to enhance the Strenght of concrete. The purpose of present study was to determine the properties of concrete containing without polymer thread and Geofoam and concrete with polymer thread and Geofoam. This investigation was carried out using several tests, compressive test and flexural test. A various proportion of mix batches of concrete containing 0% to 5% of polymer thread with an internal of 0.5% by weight of cement. Polymer thread were tested to determine the increase the strength of concrete, results shows that , the strengthof concrete increases and workability of concrete significantly reduced as the polymer thread and Geofoam dosage rate increases.

***Keywords:--***

Polymer thread, Geofoam, Compressive Strength.

# Some Study on Bio-Inspired Optimization Algorithms

**Pramod B. Bhalerao**., Deogiri Institute of Engineering and Management Studies, Aurangabad, India.

***Abstract:--***

Optimization is related to many areas including Engineering, Medical, and Computer Science. In optimization problems we have lot of feasible solutions and we choose best solutions among them which are more optimal. The algorithms which give optimal solutions are optimization algorithms. Nature is one of the important factor providing ideas to solve such optimization problems. The algorithms which are inspired by nature may be heuristic or Meta heuristic and they can be used to solve optimization problems. From last few years most of the researchers are focusing on such nature inspired algorithms to solve the problems. With the invention in these areas and as we are getting the best results, it can be used for various applications and leads to increase the scope. This paper gives detail study on recent initiatives taken by different researchers to solve problems with the help of Bio-inspired algorithms.

***Keywords:--***

Bio-Inspired Algorithm, Meta-heuristic, Optimization Problem, Optimization Algorithm.

# A Review On LabVIEW Based Real Time Monitoring Of HVAC System

**Ms. Pranjali Y. Chavan**., PG Student, Department of Electronics & Telecommunication Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad (M.S.) India

**Mr. L.K. Shevada**., Assistant Professor, Department of Electronics & Telecommunication Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad (M.S.) India

***Abstract:--***

This paper reviews the HVAC system. HVAC stands for Heating Ventilating and Air-Conditioning. The air conditioning system is operated in different weather conditions, a system used for controlling the humidity, temperature and ventilation in building or vehicle to maintain comfortable conditions. The HVAC system used in modern commercial buildings. The LabVIEW is used to interfaces system parameters and evaluation of AC unit performance of an HVAC system. The LabVIEW is used to display environmental as well as electrical parameters, in LabVIEW we can show inside and outside temperature, voltage, current & power, irradiation, wind speed. There is two panel window is available first is front panel and second is back panel. Front panel window interfaces this parameter continuously. This paper present and discusses the evaluation, monitoring and analysis of a HVAC system. The main objective of this work is to achieve comfortable temperature of real time monitoring in all rooms of the residence. The system works effectively in real time and natural environment cooling concepts ensure the heat ventilation system maintain the minimum possible interior temperature. LabVIEW is graphical programming software and it helps us to visualize every aspect of your applications including hardware configuration, measurement data and debugging. In this paper, a real time measurement and performance evaluation and monitoring system for metrological parameters and electrical variables for HVAC system is proposed. Automatic data acquisition, DAQ, technology made by National Instrument (NI) is used as hardware for monitoring the HVAC system performance. The software of the data acquisition system based on LabVIEW package is used to display, store, and process the collected data in PC-hard disk. This system provided good support for research and educational purposes.

***Keywords:--***

Heating, Ventilation and Air Conditioning (HVAC); Virtual instrument (VI); Real time monitoring; Environmental parameters effects, efficiency.

*International Conference on Technological Innovations in Engineering and Management*

*Aurangabad, Maharashtra, 26th & 27th, February 2018*

# Guidance Navigation and Obstacle Avoidance for Wheeled Mobile Robot Using Labview

**Priyanka Bhanudas Aghadate**., DIEMS Aurangabad.
**Aarti Wadhekar**., Assistant Professor, DIEMS Aurangabad.

***Abstract:--***

The Guidance Navigation & Obstacle avoidance for wheeled mobile robot benefits increasing importance in various growing application areas. This project represents the system to navigate the vehicle with ultrasonic sensor and National Instrument myRIO real time controller. Previously developed navigation system has two electric motor driving the tracks on each side.Also it has two encoders for providing speed to the drive wheels and the algorithm was developed using MATLAB based model running on a mini computer that interface with encoders and motors through speciality control board.

The specific focus of this research is to implement the same algorithm using LabVIEW and use of myRIO board to run the LabVIEW flow diagram real time on ground vehicle. In this research obstacle avoidance perform an important role and it is very challenging. This embedded hardware device use for real time implementation performing task like detecting obstacle distance using sensor. LabVIEW is graphical programming code was specially developed to control motor with PWM signal based on sensor feedback and to calculate algoritham perfectly. Vehicle motors are connected to myRIO for data acquisition which is placed over chassis. It also allows mathematical operations like unit delay, transfer function and integrator.

Navigation in environment is one of the most important capabilities. All this operations perform by interfacing the robot with LabVIEW & processed through myRIO. Localization is the ability to determine its own position. Path planning defines sequence of motion & give commands to reach at the desired destination from the current robot position.Robot follows the planned path by using feedback control.It has wide range of applications areas which comprises Agricultuaral monitoring, Military applications. Based on this the LabVIEW and myRIO solution is found to be user friendly and very effective for the purpose of real time implementation of GNC algorithm. This project also develops efficiency in navigation. This is also designed in the manner that it can be monitored anywhere through internet.

This system can be implemented for further use as we can also update this robot to work as a vehicle which carries load in industries, laboratories and factories. It can also be used physically by disabled populace, where they will be proficient to control the movement of the vehicle with just their hand gestures without others assistance.

# Comparative Study Of Ship Intrusion Detection By Using SAR,WSN,LABVIEW

**Purva N. Pawar**., ME-II nd YEAR,(ECE), DIEMS Aurangabad.
**Laxmikant Shevda**., Asst.Professor,Dept. Of Entc, DIEMS Aurangabad.

***Abstract:--***

Intrusion detection in the sea is a critical survelliance problem for harbor protection ,border control,and the protection of commercial facilities such as oil platforms and fisheries. In this paper we are doing the comparative study of ship intrusion detection by using synthetic aperature radar (SAR),wireless sensor network(WSN),labview. In SAR an alpha-stable distribution is used rather than traditional weibull or K-distribution method.The distribution of sea clutter in SAR was hetrogenous caused by variable wind and current condition.Image segmentation was carried out to improve homogeneity of images. WSN is powerfull method for connecting physical and digital world.In this method 3-axis accelerometer sensor we deploy an experimental WSN on the sea surface to detect ships using signal processing technique.we can detect any passing ships by distinguishing the ship generated waves from the ocean waves. By using labview the main aim is to detect ship which crossover the border secured areas using ultrasonic and axis sensor.this sensor placed at 40km apart when intrusion is passes,it senses the obstacle and measures the intruder angle and distance.this will be displayed in the form of graphical representation in labview.An alert message will be sending to controlroom using GSM(Global system for mobile communication).

# An Overview of COBIT Principals for Bring Your Own Policy Implementation

**Dr. Khan Rahat Afreen**., Department of Computer Science and Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad,(M.S), India

***Abstract:--***

COBIT is a business framework for management and governance of enterprise IT, provided by ISACA, an international professional association focused on IT Governance . As per ISACA, "COBIT helps IT professionals and enterprise leaders fulfill their IT governance and management responsibilities, particularly in the areas of assurance, security, risk and control, and deliver value to the business." BYO bring your own is a concept where employees can use their own systems, software, technology for the purpose of accomplishing organizational tasks. It is gaining rapid acceptance by the employers although it has a lot of challenges. COBIT can be the answer to the many questions faced while framing organizational policies around BYOD. While implementing BYOD, major challenges faced are not only from its technical implementation aspect but also from policy implementation and monitoring aspect. Companies may loose sensitive data if it resides on employee owned devices. COBIT documentation provided by ISACA supports many of the essential causes that are a reason for BYOD initiative. The seven enablers provide an effective foundation for any organization to embrace BYOD policy in a well structured manner.

***Keywords:--***

BYOD, COBIT, ISACA, COBIT Enablers

# Comparative Study of High Strength OPC Concrete and Steel Fiber Reinforced Metakaolin Concrete At different Temperature

**R.R. Pawar**., P.G. Scholar, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Station Road, Aurangabad (Maharashtra).

**D.S. Wadje**., Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Station Road, Aurangabad (Maharashtra).

**G.R. Gandhe**., Professor & Head, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Station Road, Aurangabad (Maharashtra).

**P.R. Awsarmal**., Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Station Road, Aurangabad (Maharashtra).

**S.B. Deshmukh**., Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Station Road, Aurangabad (Maharashtra).

***Abstract:--***

The present work deals with results of investigation of High strength Metakaolin concrete at the high temperature. The Metakaolin is varied from 0 to 15% by replacing cement at the interval of 3% by the weight of cement.The optimum percentage of the Metakaolin in concrete is obtained by the compressive test carried on the concrete. To study the effect of elevated temperature the specimens are put in the Hot Air Oven at the varying temperature of $200^0$C, $400^0$C and $600^0$C also the duration is varied. The cube of the size 150mm x 150mm x 150mm for compression strength and the beam of the size 150mm x 150mm x 700mm for the flexural strength. The cylinder of the size 150mm diameter 300mm height for the split tensile test. The workability measured with the slump cone. The weight and dry density also calculated.

The objective of this work is to do the comparative study of high strength OPC concrete and steel fiber reinforced metakaolin concrete at different temperatures of $200^0$C, $400^0$C and $600^0$C. The effects of elevated temperature on the high strength concrete materials are observed and their performance compared to the normal strength of concrete.

**26th -27th February 2018** **ICTIEM – 18** **ISBN: 978-81-932966-8-4**

***Organized by:***

**Deogiri Institute of Engineering and Management Studies**

***And***

**Institute For Engineering Research and Publication (IFERP)**

# Thermal Flexural Analysis of Isotropic Plate Using New Trigonometric Shear Deformation Theory

**Bausaheb.R. Sontakke**., Associate Professor & Head, Department of Mathematics, PratishthanMahavidyalaya, Paithan, (M.S)-431107, India.

**Rushikesh V. Pakhale**., Assistant Professor, Department of Mathematics, Deogiri Institute of Engineering and Management Studies, Aurangabad (M.S)-431005, India.

**Sachin B. Salve**., Assistant Professor, Department of Civil, Deogiri Institute of Engineering and Management Studies, Aurangabad (M.S)-431005, India.

***Abstract:--***

In the present study, thermal deformations and transverse shear deformation effects of isotropic plate were analyzed using Trigonometric shear deformation Theory. Analytical formulations and solutions for the thermal stress analysis of simply supported isotropic plate subjected to linear thermal load based on trigonometric deformation are presented. Simply supported isotropic plate is analysed for the axial displacement, transverse displacement, axial bending stress and transverse shear stress. In New Trigonometric Shear Deformation Theory having three variables for the displacement field. The displacement field for analysis of plate is trigonometric. Boundary conditions and governing differential equations of the theory are obtained using the principle of virtual work. The important feature of the theory is that the transverse shear stresses can be obtained directly from the use of constitutive relations, satisfying the stress free boundary conditions at top and bottom surfaces of the plate. Hence, the theory eliminates the need of shear correction factor. Plates with different aspect ratio are studied. Results obtained from isotropic plates subjected to linear thermal load are compared with other shear deformation theory to check the accuracy of the present theory.

**26th -27th February 2018** **ICTIEM – 18** **ISBN: 978-81-932966-8-4**

***Organized by:***

**Deogiri Institute of Engineering and Management Studies**

***And***

**Institute For Engineering Research and Publication (IFERP)**

# "To study on role and importance of Managerial skills in business."

**Mr. Feeroj N. Pathan**., Asst. Prof. DIEMS, Aurangabad.
**Ms. Sabika Razvi**., MBA Student DIEMS, Aurangabad.
**Mr. Raman Karde**., Asst. Prof. DIEMS, Aurangabad.

***Abstract:--***

This study attempts to analyze the contribution of business men in terms of their management skills towards the success of their business. Traditionally the term "management" refers to the activities (often the group of people) involved in the four general functions: planning, organizing, leading & coordinating of resources. Researchers aim behind this topic was to discover business sense in different business men. The main intension of doing this research was that this research should be guidance to the entire young entrepreneur to know all the pros and cons of business before starting. The methods used are descriptive analysis. The data for the study were collected by survey method to find out which skills were required to successfully run the business.

***Keywords:--***

Managerial skills, Entrepreneur, Time management.

*International Conference on Technological Innovations in Engineering and Management*

*Aurangabad, Maharashtra, 26th & 27th, February 2018*

# Nonlinear dynamic analysis for an Underground Powerhouse Structure considering Soil Interaction

**Sagar Patil**., Post-Graduate student, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India.

**Rahul Patil**., Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India.

**Saurabh Nirkhe**., Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering, Aurangabad, Maharashtra State, 431028, India.

***Abstract:--***

The project deals with the analysis and design of an underground Power House constructed on three different soil types. Though each and every powerhouse have mostly similar components and machines but the analysis and design of civil structures in a plant are always done with different ideas and optimized techniques. Hence this paper is based on some new and different considerations in analysis and design aspects and optimization. The objective of this project also lies in knowing the difference between analysis and design of conventional structures and important structures or special structures. There are huge different machines in power house which are subjected to axial thrust as well as vibrations. The structure results are found by means of 'ANSYS'. Optimum analysis results in optimum design. As earthquake ground shaking affects all structures below ground in case of an underground powerhouse and since some of them must sustain or withstand the strongest earthquake ground motion, they have to be designed and checked for different types of design earthquakes. In the seismic design of underground structures, it must be taken into consideration that the earthquake hazard is a multi-hazard, which includes ground shaking, fault movements, mass movements blocking entrances, intakes and outlets, etc. Special problems are encountered in the pressure tunnels due to hydrodynamic pressures and leakage of lining of damaged pressure tunnels. The seismic design and performance criteria of underground structures of hydropower plants are discussed in a qualitative way on the basis of the seismic safety criteria applicable to large dams.

# A Review Paper on "Experimental Studies and Performance Evaluation of Hard Turning Operation By Using PCBN Tools"

**Sanket S Satpute,**., PG student, Mechanical Engineering Department,Deogiri institute of engineering and management studies, Aurangabad

**Mangesh D Urney**., Assisant Professor, Mechanical Engineering Department, Deogiri institute of engineering and management studies,Aurangabad

***Abstract:--***

The Quality of each and everyhard turned part mainly depends on mechanical properties of the tool material and work piece material, In this research work the Multiobjective study of hard turningprocess parameters for obtaining greater hard turned material strength with good mechanical properties. The tool used for this study is PCBN tool and which is used on EN8D work piece. This EN8D material is widely used commercially for both continuous and interrupted machining modes which help us to study the parameters such as tool life, tool wear, tensile strength, depth of cut, micro geometry, turning speed. Angle of cutting etc.

***Keywords:--***

Hard Turning, Tensile Strength, turning speed, angle of cutting, depth of cut, tool life, tool wear.

# Feature Extraction Methods of Iris Recognition

**Sarika B.Solanke**., Assistant Professor, Department of Computer Science and Engg., DIEMS, Aurangabad (MS),India.
**Ratnadeep R. Deshmukh**., Professor, Department of Computer Science, Dr. B. A. M. University, Aurangabad (MS), India.

***Abstract:--***

Biometric recognition system is today's essential need. Among the biometrics, iris has highly accurate and reliable characteristics. Iris recognition technique is used in many applications such as Aadhar card system, Airport security, access control in factories, identification for Automatic Teller Machines and restricted access to police evidence rooms.The algorithms used in iris recognition are categorized into three stages: Image Preprocessing, Feature Extraction and Template Matching.We have studied the various Iris Recognition algorithms. This paper provides a review of major feature extraction methods of iris recognition.The Image preprocessing and Feature Extraction are the essential steps for accurate accuracy. Cumulative Sums Change Analysis Method of feature extraction is more reliable than other methods. Hamming distance method is most useful method for template matching. Various databases of iris are available that will be useful for researchers to implement the application for identification or verification.

***Keywords:--***

Iris Recognition, Image Preprocessing, Feature Extraction,Template Matching.

# A Review on Medicinal Importance and Synthesis of benzothiazolo-[2,3b]-quinazolin-1-one Derivatives via Multi-Component Reactions

**Satish A. Dake**., Department of Engineering Chemistry, Deogiri Institute of Engineering and Management Studies, Station Road, Aurangabad-431005, (MS), India

**Ashok R. Yadav**., Organic Chemistry Division, National Chemical Laboratory, Dr. Homi Bhabha Road, Pune-411008, India

**Changdev V. Mane**., Department of Engineering Chemistry, Deogiri Institute of Engineering and Management Studies, Station Road, Aurangabad-431005, (MS), India

**Jyoti M. Weldode**., Department of Engineering Chemistry, Deogiri Institute of Engineering and Management Studies, Station Road, Aurangabad-431005, (MS), India

**Rajendra P. Pawar**., Department of Chemistry, Deogiri College, Station Road, Aurangabad-431005, (MS), India

***Abstract:--***

Synthesis of benzothiazolo-[2,3b]-quinazolin-1-ones and their derivatives offered important biological and pharmaceutical applications in Chemistry research field. Multi-component reactions in recent days gained a new aspect in designing methods to produce sophisticated libraries of biologically active heterocyclic compounds. Green Chemistry has become a powerful tool in Chemistry in the last decade and recent areas of interest are the production of organic bioactive molecules via MCRs with environmental friendly solvent system such as water, ionic liquids etc. Multi-component methodologies contribute remarkable advantages over conventional reactions due to maintaining their atom economy, convergence, easy work up procedure, structural multiplicity and short reaction time. The present review express various synthetic methods and medicinal importance of benzothiazolo-[2,3b]-quinazolin-1-ones and their derivatives.

***Keywords:--***

Biological activity, [2,3b]-quinazolin-1-ones, multi-component reactions, organic transformations, synthesis.

# Sign Language Based Trignometry Identify Interpreter System Using LABVIEW

**Sheetal V. Patil**., Department of Electronics and Telecommunication Engineering Marathwada Shikshan Prasarak Mandal's Deogiri Institute of Engineering & Management Studies, Aurangabad Maharashtra State, India 2017-2018

**Prof. Anita Nikalje**., Assistant Professor, Department of Electronics and Telecommunication Engineering Marathwada Shikshan Prasarak Mandal's Deogiri Institute of Engineering & Management Studies, Aurangabad Maharashtra state, India 2017-2018

***Abstract:--***

The aim of this system is to design teaching learning module for a person who are deaf and hard of hearing. This system is used to translate sign language gesture to equivalent trignometric identity. It is basically motion based system. In this system we introduce new sign language gestures for higher mathematics. The flex sensor are used to identify the gesture. The change in resistance across each flex sensor is recorded as high or low resistance for each finger postion. Arduino is used to process this data.10 trignometric identities are successfully interpreted. In this system we are going to used indian sign language. Sign language is defined as the language of the deaf and hard of hearing people by which they are able to express there thoughts. This system will help to the impaired children to study the higher mathematics and trignometric identity.

***Keywords:--***

Arduino, Flex Sensor, LABVIEW Software, LCD Display.

# Multi-Precision Floating Point Arithmetic Logic Unit for Digital Signal Processing: A Review

**Shaikh Shoaib Arif**., Assistant Professor at Deogiri Engineering College Aurangabad.
**Dr.B.B.Godbole**., Associate Professor, K.B.P.C.O.E. Satara.

***Abstract:--***

In a wide range of DSP applications includes processing of sensor array processing, audio and speech signal processing, control of systems, radar and sonar signal processing, spectral estimation, digital image processing, seismic data processing, biomedical signal processing, statistical signal processing, signal processing for communications, Filter designing & many high accuracy based operations. Floating point operations are used due to its huge dynamic range, high accuracy and straightforward operation rules. With the increasing needs for the floating point operations for the high-speed signal processing and the scientific operation, the requirements for the high-speed hardware floating point arithmetic units have become more useful.

***Keywords:--***

Arithmatic Logic Unit, Digital Signal Prosessing, Floating Point, FPGA, Multiplier, Super computing, Synergistic Processor, Quadraple Pricision.

# Energy-Efficient MAC Protocols for Wireless Sensor Networks

**S. S. Ponde**., Deogiri Institute Of Engineering and Management Studies

**Dr. S.S. Lomte** ., M. S. Bidve college of Engineering, Latur.

***Abstract:--***

Due to advancement in the technology, Wireless sensor networks proves to be most promising technology for many application area where the continuous real time monitoring and sensing of various process parameters are the key objectives. But the low energy poses a great design challenge for WSN. Many energy-efficient solutions have been proposed by the researchers. Energy-efficient medium access control protocol is one of the solutions. This paper studies different MAC protocols such as TDMA, BMA and S-MAC. We analyze the energy models of these protocols and their performance of energy consumption is simulated with NS-2 network simulator

***Keywords:--***

Wireless sensor networks, Energy Consumption, TDMA, BMA, S-MAC.

*International Conference on Technological Innovations in Engineering and Management*

*Aurangabad, Maharashtra, 26th & 27th, February 2018*

# A Review of Opinion Extraction and Analysis

**Prof. S. C. Nandedkar**., Asst. Prof., DIEMS Aurangabad.
**Prof. J. B. Patil**., Principal, R. C. Patel COE, Shirpur.
**Prof. P. A. Joshi**., Asst. Prof., DIEMS Aurangabad.

***Abstract:--***

Internet is becoming user centric and people preferring to exchange opinions through online social means such as – discussion forums, blogs and micro-blogs. This user opinion base is a valuable resource from buyers, as well as sellers' perspective. It is helpful for buyers to choose a good product and helpful for sellers to improve their product. This is the task known as opinion mining and analysis. This paper represents a simple approach for understanding customers review using machine learning technique. It also illustrates the steps: data gathering, preprocessing, POS tagging, dependence analysis, opinion and target word finding. It also gives the technique for measuring the performance of the above stated system. Finally it creates the knowledge base to fulfill the said intension.

***Keywords:--***

Data mining, opinion mining, sentiment analysis, unstructured corpus.

# To Study the Effects of Diseases on Plants Using Hyperspectral Data

**Swati B. Magare**., Asst. Prof., DIEMS, Aurangabad
**Dr. Ratnadeep R. Deshmukh**., Professor, Dept. of CS & IT, Dr. BAMU, Aurangabad
**Jaypalsing N. Kayte**., Research Student, DIEMS, Aurangabad
**Rohit S. Gupta**., Research Student, DIEMS, Aurangabad
**Rohinee Misal**., Research Student, DIEMS, Aurangabad

***Abstract:--***

Many diseases cause severe economic loss to farmers through increased cost of pesticides and reduced yields. Visual inspection of disease is carried out when the photosynthetic tissues are already damaged. Hyperspectral reflectance is effective and useful technique to assess the disease infection. The aim of this study is to examine the potential of hyperspectral reflectance in detecting the incidence of disease on various plants. It analyzes the plant health through measurement of reflectance at several wavelengths which allows disease to be detected earlier and properly controlled. This paper summarises the disease detection research work done by different authors and importance of remote sensing, spectroradiometry to determine infection in plants, crops before symptoms become visually perceptible.

***Keywords:--***

Agriculture, Plant Disease, Spectral Reflectance, Symptoms.

# Detection of Breast Cancer Using Mammogram Classification by Using 2 DWT & GLCM

**Varad Mayee**., PG Student, Department of Computer Science & Engineering, Deogiri Institute & Management Studies (DIEMS) Aurangabad, India

**P.B.Bhalerao**., Assistant Professor, Department of Computer Science & Engineering, Deogiri Institute & Management Studies (DIEMS) Aurangabad, India

***Abstract:--***

Breast cancer is found to be the most common form of cancer found in women which is the leading cause for cancer death worldwide. Detection of abnormality at the earliest increases the chances of successful treatment and can reduce the mortality rate. MRI is a widely used medical imaging technique. Noise in MRI negatively affects image processing and analysis works. The main objective of pre-processing stage is to improve the quality of image by removing the irrelevant noises and unwanted portions in the image so as to convert the image into some other representation that is more meaningful, thus making it easier to interpret the details in an image. In this proposed work various filtering algorithms are discussed and compared and an automated scheme for Magnetic Resonance Imaging (MRI) breast segmentation is proposed. It is found that there are several types of abnormalities in breast. Among those, signs of breast cancer are normally associated with asymmetry between images of left and right breasts. Other type of abnormalities related to breast tumours is presence of micro-calcifications in the breast, presence of masses in the breast and Architectural Distortion (AD). Architectural Distortion refers to, disruption of the normal arrangement of the tissue strands of the breast resulting in a radiating or haphazard pattern without an associated visible centre. Micro-calcifications (MC) are tiny deposits that range from 50 to several hundred microns in diameter, which usually appear in clusters. Masses are signs of breast cancer. Masses with speculated margins have a high likelihood of malignancy. Architectural distortion (AD) is the third most common mammographic finding of breast cancer. Literature informs that about 81% of spiculated mass and 48-60% of AD is malignant and it is estimated that 12-45% of cancers not found in mammographic screening are AD. The detection sensitivity of the current computer systems for v speculated mass and AD is not as effective as micro-calcification detection algorithms and thus there is a pressing need for improvements in their detection.

***Keywords:--***

Mammographic images, Malignant & Benign, Multiresolution Analysis, GLCM.

# Security Issues in Hadoop Framework: A Review

**K. Vishal Reddy**., Deogiri Institute of Engineering and Management Studies, Aurangabad, India.
**Jayantrao B. Patil**., R.C. Patel Institute of Technology, Shirpur, India.
**Ratnadeep R.Deshmukh**., Dept. of CS and IT, Dr. B. A. M. University, Aurangabad, India.

***Abstract:--***

In this era of Big Data, organizations collect massive volumes of data in order to derive insights for making decisions. To handle and process big data, new architectures and technologies were evolved. Out of these technologies Hadoop framework has been adopted by many organizations for storing and processing large complex data. Hadoop framework is an open source technology which has not prioritized security in its initial stages of development. Originally Hadoop has developed to work behind firewall. But, due to widely acceptance of Hadoop by many enterprises has provoked most of the cloud distributors for providing Hadoop-as-a-service. This paper firstly describes Hadoop framework, then Hadoop execution on OpenStack and finally focuses on the recent efforts taken by various researchers to provide security in Hadoop framework.

***Keywords:--***

Big Data, Cloud Computing, Hadoop, OpenStack.

# Network Security Virtualization

**Vrushali N. Huchhe**., Department of Computer Science and Engineering Marathwada Shikshan Prasarak Mandal's Deogiri Institute of Engineering & Management Studies, Aurangabad Maharashtra State, India.

***Abstract:--***

Network security management became more complex in recent years due to the necessity of deploying more network security devices at different positions/sites inside the already complex networks. The flexible transition and maximum usage of correct security devices at right places at required time with minimal management price is very difficult. NSV presents a concept of network security virtualization which virtualizes security resources to network administrator's users and thus maximally use pre-installed security devices. It also able to provide security protection to required networks with minimum management price. For verification of the concept there is a prototype system NETSECVISOR which do the maximum use of existing fixed position security devices and maximally uses software defined networking technology to virtualize network security functions. NETSECVISOR contains-

(1) a simple script language to record security services and policies

(2) a set of routing algorithms to decide shortest routing paths for different security policies based on different requirement and

(3) a set of security response functions to handle security incidents. NETSECVISOR can be deploys in both virtual test networks and a commercial switch networks to evaluate its performance and feasibility The evaluation results show that the prototype only adds a very small overhead while providing required network security virtualization to network users/administrators.

***Keywords:--***

SDN, NETSECVISOR, Openflow.

# Analyzing and Optimization of Material Selection Decision for Hydroforming Processes by using AHP and TOPSIS

**Mr. Marlapalle Bapurao Gahininathrao**., Assistant Professor, Mechanical Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad

***Abstract:--***

The hydroforming process is advanced and chipless Manufacturing process used in metal forming Industries. Now days the application of the hydroforming is increasing day by day in manufacturing because the method give the product strength is more and uniform in thinning percentage. In metal forming process the Hydroforming process is more hot area in Manufacturing. This Hydroforming method is used in Aerospace, Automobile and Agriculture Industry for Manufacturing of the Products and equipments. The material selection is major task for any product or process development. The SAW, AHP and TOPSIS methods are successfully used and the results are compared with each other. The SAW and AHP method gives us the same result or sequence. These optimization methods are multiple attribute decision making (MADM). From these methods we can achieve the selected objectives without any investment. In industries, they are using for whichever they are having some conflicts or inconsistency in their area.

***Keywords:--***

AHP, Hydroforming, MADM, Metal Forming, Optimization, TOPSIS

# Smart Health Care System Using ARM7 and Lab view

**Kavita Bhaskar Mali**., DIEMS Aurangabad
**Aarti Wadhekar** ., Assistant Professor, DIEMS Aurangabad

***Abstract:--***

The main objective of this paper is to provide excelling provision to hospitalization for patients and mainly for physician who are unable to supervise their patients at the right time in the hospital itself. The benefits of the system are to acquire different signals like temperature, heartbeat, ECG, blood pressure using specific sensors. The proposed model makes user to improve health related risks and reduce healthcare costs by collecting, recording and analyzing large data streams in real time. The idea of this project is to reduce the headache of the patient to visit the doctor every time he needs to check his blood pressure, ECG, temperature, etc. With the help of this system the time of both the patients and doctor is saved and doctors can even help the patients in emergency situation as much as possible. The outcome of this project is to give proper and efficient medical services to patients by connecting and collecting using health status monitors using specific sensors. The complete evaluation of the system is done using software called NI Lab view. The NI Lab view software is cost- effective and smart, so it is the best platform to display the results of the system. It can be used by everyone, by elderly and post operative patients as well as by the patients at remote locations and also by the patients who cannot afford the expensive healthcare in cities.

# Feedback Control System for Cutting Machine with Quality Control

**Ms. Ritu Rajendra Bhosle**., Department of Electronics & Telecommunication, Deogiri Institute of Engineering and Management Studies, Aurangabad, Maharashtra, India

**Ms. Shamli Ramakant Patil**., Department of Electronics & Telecommunication, Deogiri Institute of Engineering and Management Studies, Aurangabad, Maharashtra, India

**Prof. K.B. Dandge**., Department of Electronics & Telecommunication, Deogiri Institute of Engineering and Management Studies, Aurangabad, Maharashtra, India

***Abstract:--***

To reduces human effort for repetitive work of cutter pieces of pipes as well as providing a convenient fixture to support and hold the pipes during cutting. it can be termed as smart machine. The pipes are fed by rollers which are operated by the motors and are used to control cutting operation. The purpose of this system is to give the accurate measurement of the pipe. The setup overall configuration can be adopted by a semi-skilled worker easily and can vary the operation by making certain small changes. The design of the system is made versatile as this system can be easily adopted for various operations and for handling other small tools. The system even has the potential to add up a PLC system to control its overall working with ease and with less effort provided. This system has the potential to adopt higher level of automation if desired in future.

***Keywords:--***

Inductive Proximity Sensor, Ultrasonic Sensor, LCD Display, Arduino.

# Inelastic static analysis of building with Shear Wall

**Prof.N.M.Nikam**., Assistant Professor, Civil Department, DIEMS Aurangabad
**Prof.R.A.Thote**., Assistant Professor, Civil Department, DIEMS Aurangabad
**Prof.G.H.Dake.,** Assistant Professor, Civil Department, SYCET, Aurangabad, M.S., India.

***Abstract:--***

The recent earthquakes have exposed the vulnerability of the existing reinforced concrete buildings in India. The need for evaluating the seismic adequacy of the existing structures has come into focus and the damage and collapse of numerous concrete structures during recent earthquakes. In order to carry out seismic evaluation a simplified procedure for evaluation is highly in need for a country like India which is prone to earthquakes. The time history analysis procedure is applied for the seismic evaluation of a reinforcement concrete bare frame and frame with shear wall. Shear wall systems are one of the most commonly used lateral-load resisting systems in high-rise buildings. Shear walls have very high in-plane stiffness and strength, which can be used to simultaneously resist large horizontal loads and support gravity loads, making them quite advantageous in many structural engineering applications. In this paper, main focus is to determine the solution for shear wall location in multi-storey building. In order to examine the performance of building after performing the analysis parameters like natural period, base shear, displacement and storey drift is determined.

***Keywords:--***

SAP2000, Shear wall, Time history analysis, Pushover analysis

# Enhancing Micro EDM Machining Performances Using Carbon Nano Tubes

**Rajendra H. Shinde**., Assistant Professor D.I.E.M.S.
**Dr. D. N. Raut**., Professor V.J.T.I. Mumbai.
**Sachin M. Agrawal**., Assistant Professor D.I.E.M.S.

***Abstract:--***

Presently manufacturing industries are facing challenges from difficult-to-machine materials viz. Super alloys, ceramics and composites which require high precision and surface quality thereby increase machining cost. Electrical Discharge Machining (EDM) is a non-traditional machining process that has become a well-established machining option in manufacturing industries throughout the world. It has replaced drilling, milling, grinding and other traditional machining operations in different aspects. In addition to this rapidly developing technology aims to develop products in miniaturized compact volumes with more functions are embedded in the products. In new technology researchers mix Carbon nano tube (CNT) with dielectric fluid in EDM process because of high thermal conductivity of CNTs. The analysis of surface characteristics like surface roughness, micro cracks of work pieces shows excellent improvement in machined surface. Carbon nanotubes are generally of two types, single-walled varieties (SWNTs), which have a single cylindrical wall and multi-walled varieties (MWNTs) which have cylinders within cylinders. The lengths of both types vary greatly, depending on the way they are made, and are generally microscopic rather than nanoscopic, i.e. greater than 100 nanometers (a nanometer is a millionth of a millimeter). The aspect ratio (length divided by diameter) is typically greater than 100 and can be up to 10,000, but recently even this was made to look small. Carbon nanotubes are one of the most commonly mentioned building blocks of nanotechnology. With one hundred times the tensile strength of steel, thermal conductivity better than all but the purest diamond, and electrical conductivity similar to copper, but with the ability to carry much higher currents, they seem to be a wonder material.

***Keywords:--***

PMEDM, SWCNTs, MWCNTs

# Review- Replacement of Aggregate by waste Plastic for sustainable concrete

**Shaikh Mohd Zubair**.,Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad

***Abstract:--***

Construction Industry required millions of tons of aggregate for concrete production, comprising natural sands and gravels. In recent years use of waste materials has been increasing for sustainable concrete production and safe disposal of waste materials. Now a day's use of plastic increases in day to day life. Plastic being non biodegradable material, It create bother of concern for its safe disposal, one of the effective solution for this problem is the use of plastic in concrete. Use of plastic in concrete not only reduced the disposal problem but also makes the concrete economical and reduction in density of concrete is also possible by producing light weight concrete. Literature survey has shows that utilization of plastic either as a partial replacing material or as a aggregate could be possible for manufacturing of concrete which helps in controlling the environmental pollution due to solid waste disposal. This paper presents a review of some of the research published on use of plastic as a aggregate in concrete and its effect on fresh properties such as workability of concrete and hardened properties of concrete namely compressive strength, split tensile strength, flexural strength are presented.

***Keywords:--***

Waste Plastic ,Compressive Strength, Flexural Strength ,Split Tensile Strength, Workability.

*International Conference on Technological Innovations in Engineering and Management*

*Aurangabad, Maharashtra, 26th & 27th, February 2018*

# Extension of SVM for Multi Class Classification

**Rupali A. Mangrule**., Asst Prof, Dept. of CSE,MIT(E), Aurangabad
**Dr. R. A. Khan**., Asso Prof, Dept. of CSE, DIEMS, Aurangabad

***Abstract:--***

The support vector machine (SVM) is well known algorithm for binary classification problems. SVM was originally developed to classify only two classes. In real world, most of the applications involve multiclass classification e.g. plant disease detection, face detection, plant classification etc. Binary SVM can be extended in different ways for multi class classification problems. This paper provides a survey on different multi class approaches like One vs. one, one vs. rest, Directed Acyclic Graph(DAG) and Error Corrected Output Coding(ECOC). The paper also presents how Multi SVM is effectively used to early detect and classify the plant diseases based on plant leaf symptoms. The early detection of plant disease ultimately affects on crop production which is major factor of Indian economy.

**26th -27th February 2018** **ICTIEM – 18** **ISBN: 978-81-932966-8-4**

***Organized by:***
**Deogiri Institute of Engineering and Management Studies**
***And***
**Institute For Engineering Research and Publication (IFERP)**

# Automated System for Precision Fisheries & Vegetation Monitoring With Real Time Analysis

**Prof. Poonam Soni**., Department of Electronics and Telecommunication Engineering, DIEMS, Aurangabad (MH)
**KalpeshMahajan**., Department of Electronics and Telecommunication Engineering, DIEMS, Aurangabad (MH)
**Saiprasad Bhoskar**., Department of Electronics and Telecommunication Engineering, DIEMS, Aurangabad (MH)
**Varsha Patil**., Department of Electronics and Telecommunication Engineering, DIEMS, Aurangabad (MH)

***Abstract:--***

Hydroponics is the system of hardware and software designed to control and monitor hydroponic gardens. The goal of such a system is to create a precisely controlled automated hydroponic garden. The benefit of such a garden would be autonomous food production, self-sustainability, and conserve water as a resource. The system consists of custom electronics and software. Hardware consists of the, the Hydroponics modules. The Hydroponics modules are used for wireless plant and environmental sensing.

***Keywords:--***

Hydroponics, pH sensor, aquaponics

# Experimental Investigation in Turning Wrought Alloy (VT-20)

**Mr.Vaibhav Joshi**., P.G.Student, D.I.E.M.S, Aurangabd.
**Mr. S.C Borse**., Assistant Prof DIEMS Aurangabad

***Abstract:--***

Turning operation is one of the most basic machining processes. That is, the part is rotated while a single point cutting tool is moved parallel to the axis of rotation. Hard turning is becoming more popular for machining hardened steels as it has several benefits over grinding. The hard Turning process is defined as machining metals with hardness greater than 45 HRC. CNMG 120408 is the dominant tool material for hard turning applications due to its high hardness, high wear resistance, and high therma stability. The temperature generated in hard turning is Substantially higher when compared to conventional machining as the cutting speeds employed in hard turning are higher and dry cutting environment is usually employed.[1] Hard turning is a high speed machining phenomenon with surface speeds going normally as high as 250 m/min, some- times even more than this. So the machine tool capabilities should include high machine tool rigidity, high surface speed, and constant surface speed for profile to be finished and high accuracy with required surface finish.[2]

# Review of single phase transformer less Sine wave Inverter

**Shital Mathpati**., D.I.E.M.S, Aurangabd.

***Abstract:--***

In this fast changing world, electronics has made a great impact in each and every field. Now day's electric supply has become one of the basic needs but due to environmental conditions and practical limitation the generation of electricity is insufficient hence to fulfill the electricity requirement load shading is done, but it is not satisfying the complete requirement. Inverter is used to obtain A.C. supply from battery. Most of the conventional power inverter use transformer in their design, also gives square wave output to run house hold devices as well as industrial load because of some drawbacks with transformer and square wave inverter there is need of inverter which is free from transformer in power circuit as well as with sine output. On the other hand, transformerless power inverters are a more current innovation Transformers have two major components that drive losses.There are several reasons why square waves cause problems so need is to use sine wave.so this is paper of review of transformerless sine wave inverter.

**26th -27th February 2018** **ICTIEM – 18** **ISBN: 978-81-932966-8-4**

***Organized by:***

**Deogiri Institute of Engineering and Management Studies**

***And***

**Institute For Engineering Research and Publication (IFERP)**

# Review- Sustainable Use of Foundry Sand Partial Replacement to Fine Aggregate for Concrete

**Bodhane Swapnil**., U.G. Students, Deogiri Institute of Engineering and Management Studies, Aurangabad.
**Dhilpe Amol**., U.G. Students, Deogiri Institute of Engineering and Management Studies, Aurangabad.
**Rathod Harishchandra**., U.G. Students, Deogiri Institute of Engineering and Management Studies, Aurangabad.
**Shahane Mayur**., U.G. Students, Deogiri Institute of Engineering and Management Studies, Aurangabad.
**Shaikh Mohd Zubair**., Assistant Professor, Department of Civil Engineering, Deogiri Institute of Engineering and Management Studies, Aurangabad.

***Abstract:--***

Now a day's production of by product have been increasing day by day. Due to large production of this by product it harmful to the environment and solid waste management creating bother of concern over its safe disposal. Foundry sand is by product obtained from both ferrous and non ferrous metal casting industry containing high quality silica. Use of foundry sand not only reduced the disposal problem but also makes the concrete economical. Literature survey has shows that utilization of foundry sand could be possible for manufacturing of concrete which helps in controlling the environmental pollution due to solid waste disposal. This paper presents a review of some of the research published on use of foundry sand in concrete and its effect on mechanical properties of concrete such as compressive strength, split tensile strength, flexural strength and shrinkage are presented.

***Keywords: --***

Foundry Sand , Compressive Strength, Flexural Strength ,Split Tensile Strength, Shrinkage.

# Evaluation of Groundwater Quality and Its Suitability for Agricultural Use in Parts of Aurangabad Rural Area

**Dr.Sunil Shinde**., Assistant Professor, DIEMS, Aurangabad, Maharashtra.
**Dr. Kailas Patil**., Associate professor, Government College of Engineering, Aurangabad, MS, India.
**Dr.Parag Sadgir**., Associate professor, Government College of Engineering, MS, Aurangabad,, MS, India.
**Dr.Gajendra.Gandhe**., Professor, Deogiri Institute of Engineering and Management studies, Aurangabad, Maharashtra, India
**Prof. Shaikh Zubair**., Assistant Professor, DIEMS, Aurangabad, Maharashtra.

***Abstract:--***

Groundwater is the major source of fresh water in region where there is inadequate surface water resources. The quality of groundwater in the study area is mainly impaired by surface contamination sources, mineral dissolution, ion exchange and evaporation. Fifty four groundwater samples were selected and analyzed from Aurangabad rural area of Aurangabad district. The groundwater samples were analyzed during Premonsoon and Postmonsoon season during year 2014 for their pH, electrical conductivity, total dissolved solids, sodium, calcium, Magnesium. Suitability for irrigation was determined on the basis of the diagram of US salinity Laboratory (USSL), Sodium adsorption ratio (SAR), and Percent (%) Sodium. According to sodium adsorption ratio values for Premonsoon season of twenty seven selected wells on either side of Kham River, groundwater is categorized as per water quality analysis. It is evaluated that 18.50 % (n= 5) groundwater sample along left bank and 11.10 % (n= 3) groundwater samples along right bank are in low sodium hazard category. This type of ground water is suitable for irrigation for almost all types of crops and soils. It is observed that 29.90% (n= 8) samples along left bank and 14.8% (n= 4) groundwater samples along right bank are in medium sodium hazard category. According to USSL diagram, nine samples along left bank and thirteen samples along right bank of kham river fall in category C3S4, indicating high salinity and very high alkaline water , and addresses.

***Keywords: --***

Ground water, Industrial pollution, Irrigation, Aurangabad (MS) India, Sodium Adsorption ratio.

# A Review of Fuel Adulteration Techniques

**Pranjali P. Dharurkar**., Assistant Professor, Dept .of E &C, Babasaheb Ambedkar Marathwada University, Aurangabad, India.

***Abstract:--***

Air Pollution has become a global issues today for our country. Air Pollution causes mainly due to adulterated fuel due to which it causes tail pipe emission from the vehicles. Due to fuel contamination the original properties are altered. Consumers are having complaint that they don't have appropriate tool to verify the quality of fuel. All the existing systems are very raw and simple. The testing of petrol must be done with appropriate tool. Fuel must be in pure form for smooth working of vehicles and automobiles. Very Raw method is used for testing of petrol like filter paper test. In filter paper test,a drop of petrol is taken on filter paper and then if the color of paper remains same then it is pure otherwise it is impure. Some of the systems are introduced are tedious and time consuming.

***Keywords: --***

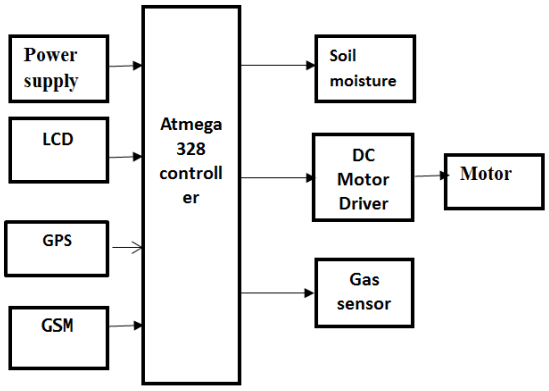
Adulteration, Air Pollution, Petrol, Diesel

# Plumb Robot

**Meghna Deshpande**., Deogiri Institute of Engineering and Management Studies, Aurangabad.
**Harsha H. Ashturkar**., Deogiri Institute of Engineering and Management Studies, Aurangabad.
**Aboli H. Kale**., Deogiri Institute of Engineering and Management Studies, Aurangabad.

***Abstract:--***

Plumb robot is a robot which is specially designed to detect the cracks and leakages in the underground pipes. Leaky water pipes pose serious problems for cities, as it leads to the loss of roughly a billion Litres of clean drinking water every day. Whenever there is a leakage problem in the underground pipes, the entire roadways are dug to detect the cracks in the pipes and also the water supply is stopped for the same amount of span causing inconvenience to the people. Also, due to the destruction of entire roadways it becomes very difficult for the people to drive vehicles on the roads leading to traffic and inconvenience. To avoid these problems we have designed a robot which will detect the underground pipe leakages. It smartly detects the cracks and displays them on the screen by which we are able to locate the cracks and leakage easily. We have developed a robot called Plumb robot which will successfully detect leakages in the pipes. As we come across various accidents which occur due to leakage of toxic gases, the well-known example is Bhopal Gas Tragedy, 1994 this was a catastrophe that had no parallel in the world's industrial history. Due to these lives of people living around is affected badly. Also leakage in water pipeline running underground will cause waste of water, as every year we face Dearth due to shortage of water, hence we should take some majors to avoid such wastage. In other countries there are various technologies for pipeline monitoring, this essentially see, hear, smell and taste various aspects of their pipeline. Pipeline use a primarily leakage detection system called as Computational Pipeline Monitoring (CPM) that uses wide variety of measurements of flow, pressure , sensors like soil moisture sensors and gas moisture sensors. The information about the leakage is given to the control room.



# A Novel Approach for Detection of Copy-Move Forgery Detection using Transform Domain

**Dr.T.Sridevi**., Associate Professor, CSE, Department of Computer Science and Engineering, Chaitanya Bharathi Institute of Technology, Hyderabad, INDIA

**B.Ramya krishna**., M.Tech 2/2 CSE,Department of computer science and Engineering, Chaitanya Bharathi Institute of Technology, Hyderabad, INDIA

***Abstract:--***

Most of the existing copy-move forgery detection methods are based on the image block matching. It becomes complicated when an intelligent adversary blurs the edges of forged region(s). To solve this problem, the authors present a new approach for detection of copy-move forgery using stationary wavelet transform(SWT) which, unlike most wavelet transforms (e.g. discrete wavelet transform), is shift invariant, and helps in finding the similarities, i.e. matches and dissimilarities, i.e. noise, between the blocks of an image, caused due to blurring. The blocks are represented by features extracted using singular value decomposition (SVD) of an image. The concept of colour-based segmentation helps to achieve blur invariance. The experimental results prove the efficiency and performance of detection accuracy is considerably higher compared with existing models.

***Keywords:--***

SWT, SVD, DWT, Colour based segmentation, Blur invariance.

# A Comparative Study on Design Wind Speed Using Extreme Value Type-1 Distribution and IS875 Approach

**N. Vivekanandan**., Central Water and Power Research Station, Pune, Maharashtra, India.

***Abstract:--***

Assessment of wind speed at a region is a pre-requisite while designing tall structures viz. cooling towers, stacks, transmission line towers, etc. This can expediently be carried out by Extreme Value Analysis (EVA) of hourly wind speed (HWS) data using probability distribution, or by using standard procedures available under Bureau of Indian Standards code of practices (IS 875) for building and structures. This paper details a study on EVA of HWS data recorded at India Meteorological Department observatories of Delhi and Visakhapatnam adopting five parameter estimation methods of Extreme Value Type-1 (EV1) distribution. The adequacy of fitting of EV1 distribution was quantitatively assessed by Goodness-of-Fit (GoF) tests such as Anderson-Darling and Kolmogorov-Smirnov, and diagnostic test using root mean squared error. The GoF and diagnostic tests results presents the order statistics approach (OSA) is better suited amongst five methods adopted for estimation of wind speed for Delhi and Visakhapatnam. The results of 3-second average wind speed obtained from EVA of hourly rainfall adopting EV1 (using OSA) distribution are compared with IS 875 approach for arriving at a design wind speed. Based on the results obtained from EV1 distribution and IS 875 approach, the recommendations are made and presented in the paper.

***Keywords:--***

Anderson-Darling, Extreme Value Type-1 distribution, Kolmogorov-Smirnov, Order Statistics Approach, Wind speed

# A Cuda Based Impementation of an Image Using Computer Vision Libraries

**Naveed Anjum Khan**., ME, IInd Year, Deogiri Institute of Engineering and Management Studies, Aurangabad.

***Abstract:--***

Image Verification has become major trend in automation industry to validate images from high resolution cameras at greater performance. Recent technological developments in computing have made it possible for image processing algorithms to work at greater speed and at higher accuracy. However, in traditional serial manners, the operations of both methods are time-consuming.

In this project, initially we are proving the possibility of CUDA based implementation of image comparison algorithms to automate image verification using NVIDIA CUDA Enabled Graphics Processing Unit, later we are going to compare the results with serial implementation and, finally a service executable based tool is developed using COM as well as named pipes based Inter Process Communication interface to make these parallel algorithms accessible by third party tool like Labview.

***Keywords:--***

Automation, Validation, Parallel Processing, Graphics Processing Unit, CUDA, Inter Process Communication, performance comparison

# Wireless Digital Thermometer Using PSoC1

**M. N. Kumawat**., Dept. of Electronics, Deogiri College, Aurangabad.
**V. T. Kulkarni**., Dept. Of Electronics, Shivechhatrapti College, Aurangabad.
**S. N. Helambe**., Dept. of Electronics, Deogiri College, Aurangabad.

***Abstract:--***

Today it is very complex taking care of small kids and elder people who suffer from fever. We have to measure temperature at intervals of peoples. For that purpose, we need to Digital Thermometer to measure their body temperature. This paper presents Portable Wireless Biomedical Digital Thermometer System. In which we can measure body temperature of the patient and transmit temperature using wireless Bluetooth communication.

***Keywords:--***

Digital thermometer, PSoC1, LM35, Wireless Technology.

# Recent Advances in Metal Surface Treating Technology-Review

**S. J. Parihar**., Research Scholar, Bhagwant University Ajmer, Assistant Professor, Devgiri Institute of Engineering & Management studies, Aurangabad

**S.T.Purkar**., Principal, Thakur Shivkumar Singh Memorial's, Engineering College, Burhanpur, MP.

***Abstract:--***

New materials like micro alloy steels, titanium-nitride or vanadium nitride inserts, super alloys, composite materials, magnetic materials, electric and electronic materials, hard and wear resistant tool steels etc. have been developed in the last fifty years. Development of these and many more new materials have necessitated the development of new heat treatment technologies which are more efficient, environment friendly and commercially viable. In the beginning metallic components were being treated using conventional heat treating technics like annealing, normalizing, hardening, tempering, surface hardening by carburizing, nitriding, flame hardening, induction hardening etc. Over the years heat treating technologies have been evolved to modern and more efficient, more accurate and more environment friendly and commercially viable techniques.

This paper gives brief review of the conventionally used surface hardening heat treating techniques along with the newly developed techniques such as laser beam hardening, electron beam hardening, ion implantation, plasma heat treatments, aqueous plasma heat treatments etc. Instrumentation and process control have contributed remarkably in taking the heat treating technology to a higher level and some light is thrown on this aspect too.

***Keywords:--***

hardening, carburizing, plasma heat treatment, aqueous plasma etc.

# IFERP-ICTIEM International Conference

# IFERP-ICTIEM Explore

## Website: www.ictiem.com

## Past Conferences





## Upcoming Conferences





Our Associates:

Technoarete

ALL CONFERENCE ALERT
Academics Conferences at a glance

Conference Alerts
Global Academic Conferences

ECA
Get World wide Engineering Conferences Update..


**Contact Us:**

**IFERP**

**Girija Tower, MMDA Signal, Arumbakkam**

**Chennai - 600 106**

www.ictiem.com Any Queries: info@ictiem.com



978-81-932966-8-4