ICETETM-19

International Conference on Emerging Trends in Engineering, Technology and Management

Hosapete, Karnataka

26th & 27th April, 2019

Organized by:

Proudhadevaraya Institute of Technology (PDIT)

In Association with

Institute For Engineering Research and Publication (IFERP)

Rudra Bhanu Satpathy,
Chief Executive Officer,
Institute For Engineering Research and Publication.

On behalf of ***Institute For Engineering Research and Publications (IFERP)*** in association with ***Proudhadevaraya Institute of Technology (PDIT),*** Hosapete, Karnataka. I am delighted to welcome all the delegates and participants around the globe to ***Proudhadevaraya Institute of Technology (PDIT), Hosapete, Karnataka*** for the ***"International Conference on Emerging Trends in Engineering, Technology and Management (ICETETM-19)"*** Which will take place from ***26th-27th April'19***

Transforming the importance of Engineering, the theme of this conference is ***"International Conference on Emerging Trends in Engineering, Technology and Management (ICETETM-19)"***

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 & PDIT)** 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 ***Hosapete, Karnataka.***

Sincerely,

Rudra Bhanu Satpathy

Preface

The **"International Conference on Emerging Trends in Engineering, Technology and Management** ***(ICETETM-2019)"*** is being organized by ***Proudhadevaraya Institute of Technology (PDIT),*** Hosapete, Karnataka in association with ***IFERP-Institute for Engineering Research and Publications*** *on the 26th – 27th April, 2019.*

Proudhadevaraya Institute of Technology has a sprawling student –friendly campus with modern infrastructure and facilities which complements the sanctity and serenity of the major city of Hosapete in Karnataka.

The ***"International Conference on Emerging Trends in Engineering, Technology 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, Technology and Management"** which were given international values by ***Institute for Engineering Research and Publication (IFERP).***

The International Conference attracted over 119 submissions. Through rigorous peer reviews 67 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.

ICETETM-2019

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Veerasaiva Vidyavardhaka Sangha
"Togari Veerappanavara Datti Avarana" Smt. Allum Sumangalamma Road, Gandhi Nagar, BALLARI-583103. (Karnataka)
Tel : 08392 - 257444 Fax : 08392-256188 Email: vvsbly@gmail.com Website : vvsanghaballary.org

Ref. No.:

Date: 20 APR 2019

Sri Udeda Basavaraj

President,
Veerashaiva Vidyavardhaka Sangha
Ballari

Message

I am very happy to know that the Proudhadevaraya Institute of Technology, Hosapete is organizing an International conference on **Emerging Trends in Engineering, Technology & Management (ICETETM-2019)** during 26th and 27th April 2019 and bringing out a Book of Abstracts.

I have learnt that many research scholars from India and abroad are participating in the conference to enlighten the present trend in Engineering. Their enlighten knowledge is boon to the upliftment of modern society.

I hole heartedly appreciate the efforts made by the organizing committee on this aspect.

My well wishes are with the organizing committee for the success of conference.

(Sri Udeda Basavaraj)

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Tel : 08392 - 257444 Fax : 08392-256188 Email: vvsbly@gmail.com Website : vvsanghabellary.org

Ref. No.:

Date 20 APR 2019

Sri T Kotrappa
Secretary,
Veerashaiva Vidyavardhaka Sangha
Ballari

Message

I am happy to learn that the Proudhadevaraya Institute of Technology, Hosapete is organizing an International conference on **Emerging Trends in Engineering, Technology & Management (ICETETM-2019)** on 26th and 27th April 2019.

I am sure that ICETETM-2019 provides an opportunity to researchers working in various areas in Engineering technology and Management to come together and share their research findings and to discuss the future directions on related research.

I am sure that this conference will give opportunity for research students a good beginning for pursuing their research.

I wish the conference a great success.

(Sri T Kotrappa)

GOVERNMENT OF KARNATAKA

Karnataka State Higher Education Council

Dr. S.A. Kori,
M.Tech, Ph.D., (IIT-KGP), FIE,
Executive Director & Member Secretary

Date: 20-04-2019

Message

I am extremely happy to note that the Proudhadevaraya Institute of Technology, Hosapete is organizing two days International conference on **Emerging Trends in Engineering, Technology & Management (ICETETM-2019)** during 26th and 27th April 2019.

Innovation is a keyword to the launch of novel products in this world. It gives me a colossal pride in organizing this conference where researchers, academicians, professionals, technocrats can share and exchange their views in the context of innovations in Engineering technology & Management.

I congratulate the organizers for coming out with this kind of programme, which I am sure, will go a long way in fulfilling the objectives set out.

I wish the programme all the success.

20/4/19

Dr. S. A. Kori

No. 30, Prasanna Kumar Block, Bengaluru Central University Campus, Y. Ramachandra Road, Gandhinagar, Bengaluru - 09
Ph : 080 2234 1391 Fax : 080 2234 1393, Web : kshec.ac.in E-Mail : ksche.bangalore@gmail.com, edkshec@yahoo.com

Sri Janekunte Basavaraj
Chairman
Proudhadevaraya Institute of Technology,
Hosapete

Message

I am really happy to know that the Proudhadevaraya Institute of Technology, Hosapete is organizing an International conference on **Emerging Trends in Engineering, Technology & Management (ICETETM-2019)** during 26th and 27th April 2019.

I am confident that the ICETETM-2019 will provide an excellent opportunity for the academicians, researchers and technologists to interact and exchange their research findings.

My congratulations to the organizers, participants of ICETETM-2019 and I wish the conference a great success.

(Sri Janekunte Basavaraj)

Dr S M Shashidhar
Principal
Proudhadevaraya Institute of Technology,
Hosapete

Message

It is indeed a matter of immense pleasure to announce that the Proudhadevaraya Institute of Technology, Hosapete is organizing an International conference on **Emerging Trends in Engineering, Technology & Management (ICETETM-2019)** during 26th and 27th April 2019 and bringing out a Book of Abstracts.

This conference is the culmination of six months sustained efforts by the members of the organizing committee and I extend my warm greetings and felicitations to them. I am also happy to note that over 80 research papers are selected for presentation in the conference. This conference has an important part to play in bringing those from academia and industry that are leading the development and in providing a platform for exchanging ideas and experiences in the research and development

I am sure that the deliberations of the conference will promise the research in the thrust areas in Engineering Technology and Management and bring comforts to mankind.

I congratulate the organizers on attracting a wide range of papers from experts in their fields, and wish all speakers and delegates a most informative and enjoyable conference.

(**Dr S M Shashidhar**)

Dr. Rohitha U M
Dean (Academics)
Proudhadevaraya Institute of Technology,
Hosapete

Message

On behalf of the 2019 ICETETM Conference Committee, we are so excited to host the International conference on **Emerging Trends in Engineering, Technology and Management** for the first time at Proudhadevaraya Institute of Technology, Hosapete. I am honored and delighted to welcome you to Conference.

Our technical program is rich and varied with 2 keynote speech and 2 invited talks and around 80 technical papers split between 3 parallel oral sessions each day. All accepted and presented papers will be published in the Scopus indexed or UGC referred journals based on the choice of the authors. Abstract of the papers are included in the proceedings of the conference.

As a conference chair of ICETETM 2019, I know that the success of the conference depends ultimately on the many people who have worked with us in planning and organizing both the technical program and supporting social arrangements. In particular, we thank the Program Chairs for their wise advice and brilliant suggestion on organizing the technical program; the Program Committee for their thorough and timely reviewing of the papers, and our management who have helped us to keep down the costs of ICETETM 2019 for all participants. Recognition should go to the college Organizing Committee members who have all worked extremely hard for the details of important aspects of the conference programs and social activities.

I would like to express my thanks to all authors for their outstanding contributions, program committee members and session chairs. I express my deep sense of gratitude to the PDIT Management for their support and encouragement.

U. M. Rohitha

(Dr. Rohitha U M)
Conference Chair ICETETM-2019

Dr Veerabhadrappa Algur
Dean (R&D)
Proudhadevaraya Institute of Technology,
Hosapete

Message

It is very happy occasion for the Proudhadevaraya Institute of Technology, Hosapete is organizing an International conference on **Emerging Trends in Engineering, Technology & Management (ICETETM-2019)** during 26th and 27th April 2019.

The main objective of the conference is to engender advances and innovations in the field of Engineering technology and Management. The conference is aimed at providing a platform to all researchers to interact, share their research findings and to discuss their research ideas with the co-researchers from all over the world. It also provides an opportunity to highlights recent developments and to identify emerging and future areas of growth in the existing fields.

I sincerely thank and appreciate the dedicated efforts of all those involved in organizing this international conference ICETETM-2019. I am confident that ICETETM-2019 will be a memorable and rewarding experience to all the delegates. I wish all the delegates a technically satisfying and pleasant stay during ICETETM-2019.

(Dr. Veerabhadrappa Algur)
Organizing secretary- ICETETM-2019

ICETETM-19

Keynote Speakers

Dr. Vijay Tharad,

Director Operations at Corporate Professional Academy
Technical Training & Career Development
Mechanical or Industrial Engineering

MESSAGE

I feel privileged to receive invitation for keynote address in the "International Conference on Emerging Trends in Engineering, Technology and Management" being held on 26th and 27th April 2019 at Proudhadevaraya Institute of Technology (PDIT) and in association with Institute for Engineering Research and Publication (IFERP).

The universe from the stone age to the current advanced civilized stage have got transformed by the continuous relentless intrinsic desire of mankind from time immemorial to change the destiny of the world by making the world a better place to live by developing science and technology. Every generation had worked on the principle of making the world better by developing science and technology through research and development making things and life simple, easy, faster. It has been a continuous process to generate new ideas, convert them into new processes by creative research in all arena of mankind through scientific and technological advancement.

The travel from what we were there in the past to what we are today and what we will be tomorrow is the result of generation of ideas, continuous research and development and managing resources to reach all parts of the globe for the benefit of mankind.

During past 5000 years education and knowledge grew and spread to every part of globe with the help of educational institutions. The knowledge generated through research was passed from generation to generation through educational institutions by storing them in books, research documents, thesis, prototype modelling and creation of new inventions.

The humanity today owes a lot to all those human minds who pursue and continue to think and invent better, smoother and faster technological products to meet the need of every aspect of human, plant, animal life, increasing productivity, making the world pollution free, providing better health care enhancing life to all who live on this planet earth.

The purpose of my presentation today in this conference is to emphasize the need for energising every youth to make them aware of their role which they have to play to make this universe a heavenly place for living. Every living being to utilise the greatest gift of God (Human Mind) to tap new ideas, do research, invent new technology in the area of their passion and give to the world new technologies by virtue of their efforts, the whole world becomes highly developed place to live.

The only way we achieve what we want is by encouraging all educational institutions to groom the youth to take research as an important integral part of their learning process and this conference is

aiming to achieve this objective. I appreciate the effort of PDIT and IFERP for creating this awareness and importance of Research as a part of every faculty of knowledge stream.

This conference is spreading the message that Science and Technology is one of the key aspects of the advancement of the world and evolution. Science on its own has its various applications so also does technology. The Emerging trends are what world needs, what research we have to-do to fulfil those gaps which exist today in science and technology. Some of the areas of technological development are from communication, transportation, various field of entertainment, healthcare, agriculture. All improvement that we experience is dependent on Science and Technology.

BIOGRAPHY

Dr. Vijay Tharad is currently Director Operations at Corporate Professional Academy for Technical Training and Career Development and caters to the Technical Training needs of employees of corporate world and provides consultancy services to Universities and Engineering Colleges for Career development of engineering students for smooth switch over from Academic world to corporate culture and work ethics. He has recently retired from Multinational Company Caterpillar India Private Limited after serving them for over 25 years where he was Chief Technical Training consultant for Cat products mainly Diesel Engine, Generator sets and Heavy Earth Moving Machines.

Vijay Tharad has an extensive background in diesel engine, modern electronic controlled diesel engine and latest after treatment technology since 1989. He was involved with training thousands of Cat employees and other corporate employees on emission control systems to help diesel and alternative combustion engines meet future regulated limits. He has authored training material on Diesel Emissions and Their Control, a comprehensive handout, and continues to present seminars in diesel engine technology, selective catalytic reduction for diesel engines, and exhaust gas recirculation.

N. Vivekanandan,

Scientist,
Central Water and Power Research Station,
Pune
(Ministry of Water Resources, River
Development and Ganga Rejuvenation)

BIOGRAPHY

N. Vivekanandan post graduated in mathematics from Madurai Kamaraj University in 1991. He obtained Master of Engineering in hydrology from University of Roorkee in 2000. He also obtained Master of Philosophy in mathematics from Bharathiar University in 2006 and MBA (Human Resources) from Manonmaniam Sundaranar University in 2013. In addition, he obtained Master's degree in Public Administration from University of Madras in 1996 and Master's degree in Sociology from Manonmaniam Sundaranar University in 2012. He hold six PG Diploma's to his credit in various fields viz., Operations research, Computer applications, Software based statistical analysis, Software based statistical methods and applications, Personnel management and industrial relations, financial management.

He has professional experience of 27 years which include 1 year in teaching, 1 year 6 months in industry and 24 years 6 months in R&D. He associated in conducting R&D studies related to the fields viz., analysis of hydrological and hydrometeorological data using probabilistic methods, flood modelling, hydropower, irrigation planning, low-flow and drought management, rainfallrunoff modelling using soft computing, strategic issues in water related sectors, water resources planning and management, water quality modelling, etc.

He performed the key role in implementing the World Bank aided hydrology project at CWPRS in two successive terms, viz., Hydrology Project Phase-1 (2000 to 2004) and Hydrology Project- II (2006 to 2014). He also the editorial board and review panel member of more than 25 national and international journals. He published 190 technical papers (viz., 67 in international journals, 54 in national journals, 35 in international conferences, 30 in national conferences and 4 technical documents). He published 30 technical reports based on the R&D studies include water resources assessment, rainfall-runoff modelling, flood modelling, assessment of low-flow and storm water drainage. He performed the role of Chairperson/ Co-Chairperson for more than 25 technical events viz., national/ international conferences, workshop, seminar, etc.

He received the Ministry of Water Resources Fellowship for his Master's degree in Hydrology. He received the award (Gold Medal) from Union Ministry of Irrigation and Power Award in 2000 for the paper published in Indian Institute of Engineer's journal. He also received the best paper award from Ministry of Water Resources in 2012 and Bal Krishna Institute of Technology, Kota (Rajasthan). He performed the role of resource person for 20 educational institutions and R&D organisations. He also delivered more than 40 lectures include invited talk and plenary lectures in various technical events viz., conferences, seminar, workshop, etc.

ICETETM-19

International Conference on Emerging Trends in Engineering, Technology and Management

Hosapete, Karnataka, 26th - 27th April , 2019

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ICETETM-19

International Conference on Emerging Trends in Engineering, Technology and Management

Hosapete, Karnataka

26th & 27th April, 2019

ABSTRACTS

ICETETM-19

Organized by:

Proudhadevaraya Institute of Technology (PDIT)

In Association with

Institute For Engineering Research and Publication (IFERP)

Review on IEEE 754 Standard Single Precision Floating Point Multipliers Designed using Urdhva Triyagbhyam Sutra of Vedic Mathematics

Sai Venkatramana Prasada G S, Assistant Professor, Dept. of E &C, Srinivas University, Mangaluru, Research scholar, School of E&C, Reva University, Bengaluru

Dr.G Seshikala, Professor, School of E&C, Reva University, Bengaluru

Dr.Niranjana S, Associate Professor-Senior Scale, MIT, MAHE, Manipal

Abstract:--

Multiplication of the floating point numbers is the very important operation in digital signal processing. So the performance of floating point multipliers play a critical role in any digital design. Floating point numbers are represented using IEEE 754 standard in Single precision(32-bits), Double precision(64-bits) and Quadruple precision(128-bits) formats. Multiplication of these floating point numbers can be achieved by using Vedic mathematics. Vedic mathematics involve 16 different algorithms or Sutras. Urdhva Triyagbhyam Sutra is most commonly used for multiplication of binary numbers. This paper presents the overview of work done by various researchers towards the design of IEEE 754 standard single precision floating point multiplier using Vedic mathematics.

Keywords:--

Floating point multiplier, Single precision, Sutra, Urdhva Triyagbhyam, Vedic mathematics.

Response of a C-Shaped Building under Blast Loadings

Kanchan Pujari, P.G. Student, Civil Engineering Department, Deogiri Institute of Engineering and Management Studies
D.H.Tupe, Assistant professor, Civil Engineering Department, Deogiri Institute of Engineering and Management Studies
Dr. G.R.Gandhe, Professor, Civil Engineering Department, Deogiri Institute of Engineering and Management Studies

Abstract:--

Our structures especially building structures, are designed basically for dead loads, live loads for static loading conditions and for wind, earthquake and their combinations for dynamic lateral loadings. As the structures are not designed for unexpected blast load conditions it is not possible for the structures to resist such destructive forces of blast impacts. In this research work a comparative study has been done for the blast forces and earthquake forces. For this study purpose a C-shaped building was modelled for the analysis in finite element program SAP-2000. Initially the building model was analysed for Dead loads, live loads and Earthquake loads. In the second model the building is designed for Blast load. Blast load was defined as a triangular function using codal provisions suggested by IS-4991. The results then are compared and it was checked how far a building designed for EQ can withstand a blast of specific amount of TNT. Also the effect of blast forces due to shape of the building is checked. The comparative study has been mapped and indicated in the paper.

Index Terms:

Blast Loads, Earthquake loads, Non Linear analysis, SAP-2000, Time History Analysis.

Comparative Study of Returns Generated by Debt (Levered) and Zero Debt (Unlevered) Firms

Prashant Chhajer, Associate Professor, Department of Management Technology, Shri Ramdeobaba College of Engineering and Management, Nagpur, Maharashtra, India

Vandana Gandhi, Assistant Professor, Department of Management Technology, Shri Ramdeobaba College of Engineering and Management, Nagpur, Maharashtra, India.

Vishal Mehta, Assistant Professor, Department of Management Technology, Shri Ramdeobaba College of Engineering and Management, Nagpur, Maharashtra, India.

Ayushi Agrawal, Student, Department of Management Technology, Shri Ramdeobaba College of Engineering and Management, Nagpur, Maharashtra, India.

Abstract:--

The Indian economy has changed over the last few decades and so has the thought process of investors. Today, the investors have become dynamic and are less risk averse. They are willing to experiment and put their money in hitherto less preferred avenues. This study has compared the returns generated by firms having debt in their capital structure and those not having debt in their capital structure. Theoretically, equity investors require more returns in a debt (levered) company as compared to the zero debt (unlevered) firm since they are taking more risk in leveraged companies. However, some studies in the past have found otherwise.

The objective of this study is to ascertain whether leveraged companies have outperformed the zero debt companies. For the same two sample t-test is used and proves that when the times are good, the firms with low cost debt funds generate superior EPS which ultimately gets converted into higher equity returns and vice-versa.

Keywords:--

Leveraged, Zero Debt, Capital Structure and Annualized Returns.

JEL classification: G30, G32

Optimized PN Sequence Generation using Elliptic Curve Cryptography and UWD

Allamprabhu V. Kolaki, Asst. Prof. Dept. of ECE KLS VDIT Haliyal
Dr. Sunil T. D, Asst. Prof. Dept. of ECE SSIT Tumkur
Dr.G.A.Bidkar, Professor Dept. of ECE SDMCET Dharwad
Dr.S.V.Viraktamath, Asst. Prof. Dept. of ECE SDMCET Dharwad

Abstract:--

The Code Division Multiple Access (CDMA) technique is developed for military applications and also utilized in civilian application for the need of information hiding and secure signal transmission. The major issue occurs during the transmission in CDMA system is the security of data. In this proposed work, Universal Wind Driven (UWD) optimized ECC based PN sequence generation. Initially Pseudo Noise (PN) sequence is generated on the basis of Elliptic Curve Cryptography (ECC). The PN sequences have the characteristics of being like random noise with low correlation compared to any other sequence in the set. The original data is combined with optimal PN sequence and modulated by BPSK modulation and transmitted through the AWGN channel and demodulated by BPSK demodulation. The performance results proved that proposed work is efficient compared to other techniques.

Keywords:

Code Division Multiple Access, Elliptic Curve Cryptography, Pseudo Noise sequence, Universal Wind Driven optimization

A Simplified Approach for Mathematical Expression Recognition and its Conversion to Speech

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Abstract:--

The number of visually impaired people appearing for various examination is increasing every year while on the other hand, there are several blind aspirants who are willing to enrich their knowledge through higher studies. Mathematics is one of the key language (subject) for those who are willing to pursue higher studies in science stream. There is a lot of advanced Braille techniques and OCR to speech conversion software's made available to help visual impaired community to pursue their education but still the number of visually impaired students getting admitted to higher education is less. This is not because most of the data is on paper in the form of books and documents. So, there is a great need to convert information from the physical domain into the digital domain which would help the visually impaired people to read the advanced mathematics text independently. Optical Character Recognition (OCR) systems for mathematics have received considerable attention in recent years due to the tremendous need for the digitization of printed documents. Existing literature reveals that, most of the works concentrated on recognizing handwritten mathematical symbols and some works revolve around complex algorithms. This paper proposes a simple, yet efficient approach to develop an OCR system for mathematics and its conversion to speech. For Mathematical symbol recognition, Skin and Bone algorithm is proposed, which proved its efficiency on a variety of data set. The proposed methodology has been tested on 50 equations comprising various symbols such as integral, differential, square, square root and currently achieving recognition rate of 92%.

Keywords

Skin and Bone Algorithm, connected component labelling, Projection profile, Segmentation, 2D Correlation.

Design and Simulation of Sun Tracking Solar Power System

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Abstract:--

Global energy consumption is increasing dramatically due to higher standard of living and the increasing world population. The world has limited fossil and oil resources. As a consequence, the need for renewable energy sources becomes necessary factor. With the fast development of renewable energy technology, it proposes increasing demand for the higher education.

As part of the objectives of the project, a solar energy tracking rotational panel for power generation will be designed and developed as tool for power consuming loads. This paper describes the design of a solar energy tracking rotational panel for power generation. The design consists of four modules: solar energy tracking panels, signal conditioning circuit, Arduino, and motor. The design provides an excellent platform for undergraduate engineering technology students to study the concept of solar energy and alternate source for energy saving.

Keywords:

Arduino, Renewable energy Solar tracker, Sensors, Servo motor.

Experimental Studies on Mechanical Strength Properties of a Natural composite

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Abstract:--

The material field and its engineering, is a greater emerging scope over the invention of composite materials. Good strength and low cost remains the winning combination that propels composite materials into new awareness. To replace conventional materials in aerospace, automotive, highly stressed parts, mobile industry equipment and hydraulic unit's applications.

The present work is carried out on the development of polymer bio-composites. The powdered coconut shell and Rice husk are used as a filler material with matrix epoxy resin of grade HSC 7600 and Hardener of grade HSC 8210 to form hybrid composite specimens. The fabricated composites were tested as per ASTM standards to evaluate mechanical properties such as tensile strength, and impact strength and moisture test are evaluated. The result of tests how that hybrid composite has far better properties than single fiber glass reinforced composite under mechanical loads. However it is found that incorporation of Resin and coconut shell and rice husk in ratio 70:15:15 have far better properties than other two ratios.

Keywords:--

epoxy resin of grade HSC 7600; coconut shell; Rice husk; tensile strength; impact strength.

Design of High Gain DC-DC Boost Converter for PV Application and its Simulation in PSIM

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Abstract:--

With increasing power consumption and demand for power, PV applications are coming up as ideal solution. The objective of this paper is to achieve high gain, high efficiency DC-DC converter for the PV application. This converter uses three switches to boost the output voltage up to 6 times the input voltage with duty cycle in the range 16%-25%. Thus reducing the conduction losses as compared to conventional boost converter. The converter uses transformer less topology as efficiency of the transformer less topology is better than the transformer topology. The converter is designed for an input of 25-50V and output of 300 to drive load of 450W. The results are validated using PSIM software.

Key Words:
PV (Photo Voltaic) , Boost converter , Transformer less topology

Refining healthcare in terms of diabetic care: Future area of scope for artificial Intelligence.

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Abstract:--

Recently, the entire world is facing another noncommunicable disease known as Diabetics. Basic reasons behind this disease is not unique , but certainly may be due to an increase in economic burden, less activity, change in lifestyle, improper food intake and increase in the level of stress. This disease has its effects all over the ages in the world from child to old age people. Hence its treatment is a big challenge to the social and economic growth of every nation. Plenty of research is undergoing in this area to improve health care which requires certain modifications and validations by clinical trials. Advancement in artificial intelligence is able to provide unique solutions in the future. The basic motivation behind this paper is to study the entire innovation taking place in recent years in the area of diabetic prevention and detection. Continuous monitoring of blood glucose level by invasive and non-invasive sensor technology, diet monitoring system, activity monitoring, intelligent foot and artificial pancreas for diabetics is the major focus of this study. Also, these studies focus on complete medical healthcare solution by using artificial intelligence. This study will surely help to identify future scope in the area of diabetic and its prevention models which can act as a future of diabetic health care.

Keywords:—

Artificial Intelligence, Diabetic, Healthcare, Activity monitoring, Intelligent foot, Artificial Pancreas, Sensor technology, Diet monitoring.

Blur video restoration using Blind Deconvolution Method

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Abstract:--

Instability in the atmosphere and incompatibility camera settings leads to blurring of video. Closed circuit television [CCTV] is most commonly used for security purpose in homes, banks, hospitals, business, criminal investigation and colleges. Usually these cameras have resolution of 704x480 and 720x480. Even IR cameras are playing important role in industries these days. The IR cameras usually have a low resolution mostly 160x120 and 320x240 for technical reasons. In this case Image Processing is one of the boons for business, engineers, forensics and medical field to extract the required values from the image data. This paper introduces an effective method to deblur low resolution images. Blind Deconvolution method is applied to low resolution images. Then, restored gray images are converted into RGB images and write each RGB frame into the videoobject to make a video. The experimental results depict a high resolution video which is the sharpen form of low resolution video.

Keywords:—

Blind Deconvolution method, Point Spread Function (PSF), MSE, PSNR, Lucy-Richardson algorithm, Gaussian Filter.

Decision Support in Cloud based IoT Applications for the Smart Environment

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Abstract:--

Present years have seen an exceptional change in smart environment paradigms and Cloud based Internet of Things (IoT) organized with big data analytics. IoT enables a common platform for seamless exchange between smart environment and stakeholders with the advanced analysis of the shared bulk data. Cloud computing offers attractive computational and storage solutions to cope with these issues. Edge-Cloud architecture may offer new possibility to distributed cloud based internet of things applications, making best possible decisions concerning where to deploy the different application components is challenging work for the application designers. A decision support system, as a kind of interactive computer-based information system, helps decision makers to make use of data and models to solve mostly semistructured or unstructured decision problems in practice. A decision support system, with knowledge based decision analysis models and methods, incorporate databases, model bases, and intellectual resources of individuals or groups well to advance the quality of complex decisions. This paper provides the details of how much of importance of decision support framework for the cloud and IoT application designers.

Keywords:—

IoT, Edge computing, Cloud computing, Decision support system, Big data analytics.

Solar Powered Automation in Irrigation System

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Abstract:--

Irrigation is the application of controlled amounts of water to plants at needed intervals, and measures the amount of water requirement for the plant. Transparent and flexible solar panels absorb sunlight as a source of energy to generate electricity. Each module is rated by its DC output power under STC, and typically ranges from 10W - 40W. A single solar panel can produce only a limited amount of power, most installations contain multiple modules. This paper includes completely automated process by using various sensors, which helps in monitoring and controlling of various parameters. Using these software's Arduino ATMega328 and GSM module we can control the sensors used in the system. Servo motor operations are performed for tilting of solar panels & to protect the crops during heavy rains.

Index Terms:—

Algorithm, Arduino, GSM, Solar panel, Solar tilting mechanism.

Closed loop Control System Simulation of 12 Pulse Rectifier for Transient changes in Source Inductance

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Abstract:--

In modern high current industrial applications power electronic converters like 6 pulse and 12 pulse controlled converters are used. In a power system transient operation of generators will effect respective changes in source inductance of the total system this would in turn cause delta changes in firing angle of the converter in operation. This paper mainly focuses on the modelling of 12 pulse converter and to find the changes in firing angle of converter to evaluate range of operation for a set of source inductance and closed loop control of 12 pulse converter system through MATLAB/Simulink software. The effect of source inductance on the operation for 12 pulse converter is analysed. The different combinations of firing angles for converter is stated for which the converter can appropriately operate within a satisfied region with respect to the Application. A High Current Electro-plating application is considered which uses 12 pulse converter.

Index Terms:—

12 pulse converter, Electro-plating application, Transfer function, MATLAB/Simulink.

Influence of Design and Social Factors of Store Atmospherics on Impulse Buying Behavior in Sports Goods Retailing

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Abstract:--

Researchers have been very much interested in the field of store atmospherics for the past several years. According to Sharma and Stafford (2000), store atmosphere can be defined as the ability of retailers to attract prospective customers to the store repeatedly and prompt them to do purchase. Another definition by Greeland and McGoldrick (2006) is that all the physical appearance of a store can be coined into a term known as store atmospherics. According to Joo Park,Eun ,Eun Young Kim,Judith Cardona Forney(2006) Impulse buying is an unplanned,sudden,compelling behavior of a customer to buy a product. Impulse buying can occur due to the persistent urge and emotions of a customer at the time of purchase (Sultan, Abdullah J,Jeff Joireman and David E.Sportt (2012))

The study mainly focuses on the influence of design and social factors on impulse buying behavior. Store atmospheric factors has been classified into ambient factors, design factors and social factors(Baker, Grewal & Parasuraman, 1994)(Baker, Parasuraman, Grewal & Voss, 2002) on the basis of previous studies conducted by various researchers. This study focuses on the influence of design and social factors of store atmospherics on Impulse Buying Behavior. lighting, music, and color are the variables considered under design factors .Social factors are nothing but appearance and behavior of personnel and other customers at the store .

This study will be useful for sports goods retailers because impulse buying can helps in increasing sales. The study also discusses on the comparative influences of individual constructs within design and social factors specifically to sports goods retailing.

Keywords:

Store atmospherics. Impulse buying, design factors, social factors

Image Feature Matching Using PSSC

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Abstract:--

Feature matching refers to estimating robust feature correspondences between two images of same scene, which maps the key points from source to target data set. In this work an effective approach is used in the form of Progressive Sparse Spatial Consensus (PSSC) for finding more true matches from a putative set of feature correspondences. The key purpose is performing sparse approximation progressively based on spatial consensus. This significantly reduces the computation complexity as well as covers the more true matches. The spatial transformation between images is characterized by non-parametric thin plate spline kernel which enables our progressive Sparse Spatial Consensus method to handle non-rigid and rigid motions of the image pairs. The Expectation Maximization along with the maximum likelihood model is used to estimate and optimize the degree of true match. The quantitative outcomes obtained on publicly accessible data sets are verified with the results of various algorithms shows that our approach outstands in the rate of precision, recall and f-measure specifically in the case of large-scale outliers.

Index Terms:

Feature matching, Outliers, Progressive, Robust Estimator, Sparse Consensus.

An Energy Efficient Clustering Technique In WSNs

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Abstract:--

The popularity of WSNs has garnered great heights once its applications had reached different fields like military. The Wireless sensor network routing protocols can be categorized into flat routing and hierarchical or clustering routing depending upon their network architecture. In this we try to poise the energy efficiency at node level and increasing the network lifetime by proposing an Energy Efficient cluster based Hierarchical Routing Scheme. The design principle of ENEFCT The design principle of ENEFCT is that the role of Cluster Head ought to be revolved among all nodes conjointly the cluster sizes ought to be rigorously determined at totally different elements of the network to attenuate energy consumption and also to increase the network lifespan and energy potency.

Keywords:—

WSN, ENEFCT, Cluster Head, Cluster Region and Cluster Head Nominee

Mechanical Characterization of Modified and Heat-Treated Za-27 Alloy

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Abstract:--

The effect of Mn content on tribological wear behavior of ZA-27 alloy which is used in an Industrial engineering and tribological applications has been studied. 0.2%, 0.5% & 1.0% Mn ZA-27 alloy is selected for the research work. Wear tests have been conducted on as received, annealed quenched alloy and T6 type heat treatment

Mechanical tests were conducted for all the specimens and wear tests have been conducted on all the specimens under constant load of 4kg and sliding speed of 2.5m/s, on pin-on-disc type wear testing machine. To understand the wear results, volumetric wear rate are plotted and discussed. To determine the wear mechanisms of worn-out surface of samples SEM micrographs were examined. T6 type heat treated specimens shows lower volumetric wear rate when compared with the others. ZA-27/0.5%Mn content shows lower volumetric wear rate. Adhesive wear mechanism is observed.

Keywords:—

Adhesive wear, SEM, Volumetric wear rate, XRD, ZA-27 alloy

Sentiment Analysis of Movie Reviews

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Abstract:--

Sentimental analysis is one of the sub parts of opinion mining; it is the one of the new concepts of data mining. The online communication data consist of feedback in comments and reviews of particular topic that are posted on internet by internet users, where the analysis is focused on the extraction of emotions as a specific view or judgment on certain topic. Sentimental analysis system classifies text data into their respectively sentiments of positive polarity, negative polarity or neutral. In this paper, classification task of sentimental analysis of movie database is done. By using support vector machine algorithm the best accuracy is obtained.

Index terms:

Sentimental analysis, polarity, sentiments, movie reviews, classifier.

Iot Controlled Electric Grid Automation with Real Time Faults and Feeder Control System

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Abstract:--

The distribution stations and grids for the electrical transmission of power performs a key role in effective power transmission for domestic, industrial and commercial sectors. There is the importance for the safety measures and effective management of parameters.

The existing method of grid monitoring is done with SCADA and also there are different methods are used to monitor and control over the grid parameters but these methods facing with a lot of drawbacks and limitation in technology.

Keywords
IOT, NODE MCU, RELAYS, SCADA, SENSORS.

Low Power Silicon-On-Insulator Heterojunction Tunneling Transistor Architectures Analysis at Device Level

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Abstract:--

An era of accelerated technological progress characterized by innovations whose rapid application caused abrupt changes in the electronics industry for the past eight decades. Due to these advancements in the technology, there is a solemn drift towards the portable electronic systems in human life. These systems consist of adders, multiplexers, registers, memories. The major stumbling block of these portable mobile systems is the amount of power consumption. Memories are more power consuming components in embedded applications. To avoid the frequent charging of the batteries embedded systems should be equipped with large battery sources. The capacity of the battery depends on the power consumption of the system. The higher the power consumption, the higher is the battery capacity which is unacceptable for portable embedded systems. So, for better performance of integrated systems, we need effective low power VLSI techniques. Many authors proposed low power techniques for design and implementation of the systems, but the low voltage operation is the most effective energy saving method.

Low power and ultra-low power applications for different heterojunction tunneling architectures have been analyzed and presented in this paper. Analysis of heterojunction architectures can be done with ION / IOFF ratio, leakage current, subthreshold swing (SS) and materials used for manufacturing and the trade-off between these parameters is required. Therefore, the proposed architecture addresses high ION / IOFF ratio, steeper subthreshold swing and improved Miller capacitance with less leakage current. These structures thereby enhance the performance of the heterojunction architectures.

Keywords

Heterojunction, Homojunction, SOI, Low power, Subthreshold swing, Miller Capacitance

Design and analysis of Grass mower

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Abstract:--

Grass mower is an equipment used to chop up grass or weed which grows on farm land or other ground surfaces. In the present work, a prototype model of grass mower has been designed and analyzed for its performance. This equipment consists of rotating sharp edged cutting blade, which is powered by an internal combustion engine. Cutting blade unit and engine are mounted on rigid base frame which in turn moves on ground surfaces with wheels. While in action, blade which is rotating at high speed will shear the grass or weeds. In comparison with manual cutting of grass, this mechanized setup is having many merits like chopped surface is more uniform in appearance, completion of work in less time with less manual effort.

Keywords-

Grass mower, cutting blade, cutting stress analysis.

The studies on mechanical performance & behaviour of Geopolymer Concrete Subjected to Elevated Temperatures

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Abstract:--

The investigative studies on mechanical performance & behaviour of Geopolymer Concrete (GPC) before and after the exposure to elevated temperatures (of 200 0 C -1000 0 C with an increment of 100 0 C) indicate that the GPC Specimens Exhibited better Compressive strength at higher temperatures than that of those made by regular OPC Concrete with M30 Grade. The chronological changes in the geopolymeric structure upon exposure to these temperatures and their reflections on the thermal behaviour have also been explored. The SEM images indicate GPC produced by fly ash , metakaolin and silica fume, under alkaline conditions form Mineral binders that are not only non-flammable and but are also non-combustible resins and binders. Further the Observations drawn disclose that the mass and compressive strength of concrete gets reduced with increase in temperatures.

Keywords:--

Geopolymer Concrete, Elevated temperature, Mechanical Performance .

Performance Improvement of Air Path Dynamics In Diesel Engines Using LQR/LQG Optimal & Switching Control Techniques

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Abstract:--

The current challenge for the control system community is to improve the performance of the state variables associated in the air path of diesel engines. The automotive industry is using Exhaust Gas Recirculation (EGR), Variable Geometry Turbine (VGT) & Fuelling has control inputs of air dynamics. Hence, in this paper experiments are performed when the system is subjected to deterministic & random noises by designing the controller using Linear Quadratic Gaussian (LQG). The proposed controllesr are compared with Linear Quadratic Regulator (LQR) and Later, switching between two LQG controllers is also proposed to validate the results without switching.

Study on Dynamic Soil Structure Interaction of Bridge: A Review

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Abstract:--

On this paper, the idea of dynamic soil-structure interaction changed into added, and their results were discussed. One of a kind bridge model turned into tested beneath the DSSI effect and their result became analyzed for the effective design of the shape. The various dynamic version was a examine based totally on parameter on SSI conduct via the various pupil is tabulated. Evaluation technique for the collective reaction of the shape, foundation, and underlying soil became generalized in the paper. The usage of FEMPL model soil character changed into delivered to assess the dynamic soil-shape interplay. The study on numerous bridge models shows the differential within the influence of soil in seismic effect to bridge to numerous elements of the bridge just like the deck, abutments, piers, basis, and so forth.

Keywords:--

Dynamic Soil structure interaction, Dynamic loading, Static loading, Viscoelastic impedance

Save the diesel during idling runover of locomotive used in industries

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Abstract:--

This paper is practically Observation done during internship in steel industry. There is wastage of diesel in locomotive during idling run hours. In industries locomotives which are use for internal shifting of raw material & molten metal from one place to another place within industries. problem facing industries shunting locos having a two diesel engine which is used to drive the traction generator produce the electricity and generator drive a electric traction motor, these are divide into two engines Capacity of one diesel engine is 350HP and another diesel engine capacity 350HP in a single locomotive. Each diesel engine coupled with traction generator Utilizing the single engine during idling hours (it was waiting for load a few minutes to hours during this time wastages of fuel due to the negligence of loco pilot not following the standard instruction.

Keywords:

shunting, locos, Arudino, traction.

Role of Quality circles & Total Quality Management Practices in an Indian public sector Industry: A Pilot study

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Abstract:--

Quality Circle consists of a group of people, who are doing the same or similar work, who meet voluntarily and regularly to identify, analyse, discuss and solve problems in their work areas. Housing Accessory Cover (Rh) casting used in a critical helicopter component which is a magnesium alloy, thin walled casting needs special attention and careful control of all parameters. This casting has several contours with very close dimensional tolerance. Supply of housing accessory (Rh) casting for a critical helicopter component was delayed beyond the committed date due to high rejection (56%) at floor inspection & radiography. The goal of this pilot study was to examine the factors influencing the successful implementation of active Quality Circles to increase organizational productivity and establish processes to manufacture zero defect components one such unit quality circles strive to achieve 100% radiographic quality housing accessory cover (Rh) casting with zero level of rejection. In a trial run of 200 units, there was a saving of Rs 19,525 on each casting.

Key Words: -

Quality Circles, Housing Accessory, Zero defect

Alleviation of Voltage drop and Swell in the Distribution Grid Using Ultracapacitor Based Dynamic Voltage Restorer

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Abstract:--

In existent scenario power quality directly related to distribution system. Enlarged responsive and complicated loads outcome abnormal voltage, current and frequency and decrease quality of power. A Dynamic voltage restorer (DVR) is a method that prevents nonlinear loads from voltage disturbances' and reduce harmonics. Ultra capacitors have low-energy density and high-power density ideal uniqueness for reparation of voltage sags and voltage swells, which are together events that necessitate high power for little distances of time. The proposed project is DVR with ultra-capacitor to meet the true power requirements of the grid during voltage disturbances and reducing harmonics using _MATLAB/SIMULINK'.

Key Words: -

Voltage Sag &swell ,Dynamic Voltage Restorer (DVR),Ultra-Capacitor, PI Controller.

Agriculture Price Prediction Using Data Mining

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Abstract:--

Agriculture is the main source and backbone of Indian Economy and plays a vital role in individual life. In the total Gross Domestic Product (GDP) agriculture nearly contributes sixteen percent and for increasing foreign exchange it contributes nearly ten percent to the total country exports. As the population continuously increasing and to manage the livelihood of the country there's requires a proper utilization and management of agriculture products. Data mining is a better technique and best choice in predicting the accurate prices of the agriculture based on previous data. In this work various data mining algorithms are applied on the dataset to predict the future prices of the agriculture products. Keywords: Agriculture, Data-Mining, Prediction.

Keywords

Agriculture, Data Mining, Prediction, Regression.

Certain identities on class one Infinite series

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Abstract:--

Ramanujan recorded different classes of beautiful infinite series in his lost notebook and presented a relation of these series with Eisenstein series. Shaun cooper established identities involving Eisenstein series and weight one and weight two modular forms and functions. In this paper, we establish certain identities involving the infinite series with weight one and weight two modular forms and functions. Also, we evaluate convolution sums using Eisenstein series of level 3 and 6 recorded by Shaun Cooper.

Index Terms: -

Eisenstein series, Dedekind η-function, Convolution sum

2010 Mathematics Subject Classification: 11M36, 11F20

Water quality evaluation in term of WQI River Tungabhadra, Karnataka, India.

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Abstract:--

The study reports the Weighted Arithmetic Water Quality Index (WQIa) value obtained for River Tungabhadra, a major tributary of Krishna River basin. A WQIa delivers a unique rating that gives whole water quality at a specific stretch and period depending upon some water quality constraints. The principle point of a WQIa is to give complex water quality insights into data that is clear and useable by the community. Some of most critical water quality parameters such as pH, Total dissolved solids (TDS), Total alkalinity, dissolved oxygen (DO), Biochemical oxygen demand (BOD), Total hardness (TH), calcium (Ca), magnesium (Mg), and electrical conductivity (EC) were Used for evaluating the WQIa. The WQIa esteems for the Tungabhadra River oscillate from 40 to 156. The estimations of WQIa exhibited that the stream water was free of any impurities at the examining sites aside from 2-3 months where its qualities were under good condtion. On every occasion there are anthropogenic influence viz industrial effluent, agricultural runoff and domestic sewage which is directly discharge into stream water gets contaminated to some level and hence of WQI declines. It is opinioned that WQIa can be used as a device in relating the water-quality of different sources. It delivers the community a over-all awareness of the thinkable glitches with water in a specific stretch. The WQI are among the best approaches to convey the data on water-quality pattern to the public community or to the water quality policy-makers and which is help full to drive suitable mitigative measure.

Key Words: -

water-quality parameter, weighted arithmetic water quality index (WQI), Tungabhadra River.

Pollution Monitoring and Control Using IoT

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Abstract:--

One of the serious issues these days is rising pollution in air, water and sound. Increase in pollution has increased in number of diseases, where human beings are more prone to it. Therefore, to safe guard healthy livelihood and better future it has now become necessary to control the pollution. The authorities and the ordinary people belonging to that area can access the CO2, SO2, CO & Water, Noise Pollution Monitoring device. The live updates of the pollution level of the industries can be shown by the device which can be installed by a mobile application. These devices detects and notifies any increase in the pollution level to the pollution control board, so that necessary actions can be taken. Using IoT Technology we are monitoring the pollution parameter and also the details of the industry at the same time if the pollution level exceeds certain limit the power inside the industry will be Cut-off and stop the further production. To reconnect the power in the industry it is possible with the authentication signal generated from pollution control board.

Key Words: -

IoT, Node MCU, CO_2 Sensors, Noise Sensors, Water Pollution Sensors, Regulated Power Supply

Seismic Response of Building using Fluid Viscous Dampers: A Review

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Abstract:--

According to the current trends of various methods used in reduction of seismic response of buildings, mostly it is done by applying various types of energy dissipative systems or devices such as dampers. It is also used for Rehabilitation & Retrofitting of damaged building structures and as a Shock Absorber in bridges. Various types of dampers are available in markets according to the choice of designers and researchers, but it was observed that Fluid Viscous Dampers (FVD) were preferred the most of the times. Comparative studies between FVD and other type of dampers also favour FVD due to its promising and noticeable results in some researcher's studies. And also the amount of flexibility in use, reduction in damping force, wide range of application makes it more preferable to use. This paper tries to emphasize on the various approaches and methods used along with FVD to effectively minimise the seismic response of buildings and to get better results against seismic forces.

Index Terms

Fluid Viscous Dampers; Time History Analysis; Seismic Response.

Processing and property evaluation of Nano Al_2O_3 reinforced copper- 5% tin composites for bearing applications.

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Abstract:--

Nano technology has fascinated the attention of numerous material scientists and design engineers. The nano scaled particulates incorporation exhibit many attractive and special properties. The inclusion of nano particulates into the copper matrix might augments the hardness, ultimate tensile strength and yield strength significantly increases, maintaining the ductility. In this paper, the nano Al_2O_3 reinforced copper - 5%tin- metal matrix composites were manufactured by stir casting technique and reinforcement is varied from 0wt. % to 9wt. % in ventures of 3wt. %. The nano composites are characterized in terms of their mechanical and wear properties. Results revealed that, the distribution of nano Al_2O_3 particulates is fairly uniform in copper - 5%tin metal matrix. As the level of reinforcement increases, hardness, yield strength, ultimate tensile strength, and wear resistance of the copper - 5%tin – nano Al_2O_3 metal matrix composites increases. The developed nano metal matrix composites may be an alternative material for bearing applications.

Key Words: -

Sliding wear, Metal matrix composites, Nano composites, and copper tin metal matrix.

Experimental investigation on dry sliding wear behaviour of Hyper- eutectoid steel using Taguchi Technique

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Abstract:--

The microstructure is prime importance affecting the wear of materials. Hypereutectoid steels contain 15 to 32% of iron carbide which is basically avoided by industries because of the brittleness. Three plain hypereutectoid steels 0.4, 0.9 and 1.5 % C steels heat treated and developed each Pearlite + Cementite (P+C), Martensite + Cementite (M+C) and fully Martensitic (M) microstructures. Wear tests have been conducted on these specimens under different operating conditions like normal pressures 0.1249, 0.3747, and 0.6245 MPa and Sliding speeds of 1, 3, & 5 m/s, on pin-on-disc type wear testing machine. To understand the wear results, effect of normal pressure and sliding speeds on volumetric wear rate and frictional force have been studied. Wear tests have been conducted according the orthogonal array. Taguchi method is adopted to optimize the process parameters. Wear mechanisms have been studied for different operating conditions. It is observed that combination of Martensite and Cementite phases developed from 1.5% carbon specimen has better wear resistance than other specimens.

Keywords:

Hyper eutectoid steels, Normal pressure, Sliding speed, Taguchi technique, Wear mechanism.

Performance analysis of variable data rate reconfigurable architecture for SDR Receiver

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Abstract:--

In Early days, communications systems used amplitude and frequency modulation schemes in which bandwidth constraint is one of the major challenge to accommodate more data rates. As the data rate requirement increased drastically till date, The applications demands more data rates for communication using less bandwidth is considered as an efficient communication system. For achieving communication with high data rates using less bandwidth, technology migrated to digital modulation schemes. In this phase new modulation techniques like ASK, FSK, PSK were realised. ASK and FSK modulation schemes bandwidth efficiency is less as compared to PSK schemes. For best utilisation of bandwidth efficiency and less inherent noise levels, PSK schemes are used, which is suitable for high data rate applications. In this paper QPSK modulation and demodulation technique is selected for realising the variable data rate in the range of 1.2MBPS as the best bandwidth with efficient reconfigurable architecture designed for software defined radio receiver.

Keywords:--

Modulation, SDR, QPSK, QAM, FPGA, Reconfigurable Architecture.

Monitoring and Effective utilization of Renewable Energy by using Arduino and Lora

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Abstract:--

Various renewable energy plants have been globally developed from conventional fossil fuel based generation plants. However, such renewable energy sources are difficult to operate in a planned schedule and have unstable output due to unpredictable environmental conditions. In case of unstable photovoltaic and wind power generation, analysis and optimal maintenance of operation status through remote monitoring system are required. In this paper, we describe the implementation of effective utilization and monitoring system for renewable energy generation facilities with the system architecture, implementation method and analysis program. We use arduino and low cost Lora network to monitor and effective utilization of renewable energy. The monitoring system proposed in this paper can be applied to future IoT system because of the case of implementation, reduced development cost and variety of applications.

Keywords:

Renewable energy sources, Arudino, IoT

IoT Base Regular Power Consumption Measuring Device Scheme with Immediate Invoice

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Abstract:--

Electricity plays a cardinal role in day to day life. The electrical energy use in India is the third biggest after all the countries in world 5.5% worldwide split in recent years. Each human being power utilize watts in India is nearer to 0.7 KW. India's share with global energy demand will rise to 9% by 2035. IOT is an emerging field and IoT based devices have created a revolution in electronics and IT. The foremost objective of this paper is to create awareness about energy consumption and efficient use of home appliances for energy savings. Due to manual work, our existing electricity billing system has major drawbacks. This proposal gives the information on meter reading, power cut and the alert systems for producing an alarm when energy consumption exceeds beyond the specified limit using IoT. This idea is being implemented to reduce the human dependency to collect the monthly reading and minimize the technical problems regarding billing process.

Key Words:-

Arduino, GSM, IoT, Energy Consumption, Human Dependancy, Shut down, Alert message, Payment details, Daily basis, Alarm systems.

Investigation of frequency dependent dielectric property and thermal study of polysiloxane – ZnO nanocomposites

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Abstract:--

The polysiloxane – ZnO nanocomposites were prepared by solvent casting method in triethanolamine and tetrahydrofuran solvents. The prepared nanocomposites were characterized by X-ray's diffraction for structural study and surface morphology was carried by scanning electron microscopy. The XRD spectra indicate that the pure polysiloxane is amorphous in nature and ZnO nanoparticles structure remains same even after dispersion in polysiloxane. Further, the DC conductivity shows that the conductivity increases with increase in temperature due to tunnelling phenomena. Among all nanocomposites, 0.3 wt % shows the high DC conductivity of 3 x 10-2 S/cm. The dielectric study was carried out by two probe method. It is observed that 0.3 wt % of shows the low imaginary permittivity value of 576 F/m due to the dipole polarization effect. The nanocomposites of 0.3 wt % of shows the lowest tangent loss value of 0.1 due to the non-debye's type of relaxation process where the charge carriers are relaxed at the higher energy state for a longer time.

Key words:-

Polysiloxane, Titanium dioxide, Nanocomposites, Dielectric

Analysis of Soft Switching Characteristics of LLC Resonant Converter for DC-DC Application.

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Abstract:--

This paper presents the control strategy that is applied to the half-bridge LLC Resonant Converter that is applicable for the DC-DC applications. A closed-loop control is achieved by varying frequency through VCO and is analyzed with the help of PI Controller. Due to the Soft Switching (ZVS) technique the turn-on losses in both the switches(MOSFETs) of the circuit are reduced. ZVS method is used for the control of the closed-loop. Validity of the control circuit for the closed-loop is established with the help of PSIM simulation software and results for wide range of input and load. The converter's power rating is 300W. This circuit is simulated and analyzed for various tank circuits in detail and found that circuit works with very efficiency when tank W network is used. The efficiency of the converter is 95%.

Index Terms-

LLC Resonant Converter, ZVS, VCO, closed-loop control.

Seismic Retrofitting methodologies for RC Buildings: A Review

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Abstract:--

Seismic retrofitting is being increasingly regarded as a viable solution to ensure code compliance in under-designed buildings. Rehabilitation and retrofitting of buildings partially damaged due to earthquakes is done to increase their capacity in an event of earthquake. The methodology adopted depends upon the performance level desired. An attempt has been made in this paper to underline the various methodologies of seismic retrofitting for RC buildings.

Detection of Bone Cancer Using CT scans Images

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Abstract:--

From couple of years image processing techniques are extensively utilized for different therapeutic image modalities in which to distinguish infection as in brief period time factor assumes an extremely critical job. The most ideal approach to depict bone malignancy in all stages utilizing image processing. Identifying cancer in the bone is a testing issue because of its complex structure. Here, past analysts have given far reaching survey of bone malignant growth recognition using image processing strategies. A decent research work has been made to the CAD framework behind distinguishing proof of bone malignant growth by images. In this paper we proposed a bone malignant growth identification utilizing k- means segmentation and KNN classifier to recognize the bone disease utilizing image processing strategy for ultra sound images of bones.

Key words:-

Bone Disease, Ultra Sound Image, Bone Cancer, K-Means, KNN Classifier.

Experimental Investigation on dry sliding wear behaviour of plasma sprayed TiO_2 -Inconel 718 coatings on Al6061 by using Taguchi technique

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Abstract:--

This paper deals with the study of dry sliding wear behaivour of plasma spray coatings on Al6061 composites. The TiO_2 and Inconel coating ranging from 30% and 40% is coated with Al6061 alloy. Pin-on-disc wear testing apparatus is used for studying the wear behaviour of un-coated and coated on Al 6061 composites. The effect of wear parameters considered for this study was applied load and sliding speed. Taguchi method is employed to optimize the process parameters. L16 orthogonal array is used for conducting the wear experiments. The results showed that the addition of wear coated specimen (30% Inconel) was very minimal and lesser volumetric wear rate compared to uncoated Al6061. With increase in load the volumetric wear rate increases, while with increase in sliding speed the volumetric wear rate is decreased. The applied load is considered as the most significant parameter.

Keywords —

Al6061, Plasma Spray, TiO_2-Inconel718, Wear.

Effect of Post Curing On Rare Earth Particulates Filled Polymer Composite

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Abstract:--

This work is also about to make newer materials in the composites, which make better compared to other composites. The Lapox L-12 resin, E Glass fiber material and cerium oxide, which the one of the family member of the rare earth materials in the periodic table. The combination of these materials are used to study the tensile strength, Rockwell hardness and also examined the volumetric wear rate and coefficient of friction in sliding wear mechanism, in two condition i.e. with post curing (of 100oC for a period of 60 Min) and without post curing. However, due to post curing temperature the strength got increased mean while increase in the cerium oxide percentage the strength also got reduced as temperature is increase the viscosity got decreased and most of the resin is been consumed with cerium oxide, hence there is decrease in strength. Whereas the volumetric wear rate decrease with increase in filler content up to 20% filler addition then it increases with increase in the filler content, corresponding coefficient of friction decreases with increase in the filler content and later with increase in the filler content increase the coefficient of friction. SEM analysis reveals the detail of the wear characteristics; the volumetric wear rate is also increased to all the test specimens. As the load and tangentially velocity is increased the wear also increased.

Key words:-

Frictional force, Rare earth particulates, Volumetric wear rate

A Parallel Patient Treatment Time Prediction Algorithm and Its Application in Hospitals Queuing-Recommendation in a Big Data Environment

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Abstract:--

In Today's busy life everyone get illness in all the days where ever you go all Hospitals & Clinics are very busy and crowded but all people are very busy with their time schedule and with their work hence we propose system like "Parallel Patient Treatment Time Prediction".

Overcrowding is the issues we are facing in Hospitals which they are facing long periods results in substantial resources and wasting of time and becomes greater frustration endured by the Patients. It would be agreeable and better if the patients could receive the well planned treatment and know the predicted waiting time through a mobile application that updates in real time. So, a simple, user friendly and vigorous software is helpful for both Hospitals and as well as patients.

Therefore, we propose a Patient Treatment Time Prediction (PTTP) algorithm predicts the waiting time for each activities. We collect the data of a various hospitals and patients such that, we can predict and analyze that data from software realistic dataset, then the current queue of each activities or task the predicted treatment time is collected.

On the basis of this predicted waiting time, the Hospital Queuing-Recommendation (HQR) is developed. HQR going to calculates and predicts the well and suitable treatment plan for the patients. Because of large scale, realistic dataset and the requirement for real-time response, the PTTP algorithm and HQR system mandate efficiency and reduce the latency response.

Extensive experimentation and simulation results says the effectiveness and applicability of this model for patients to minimize their waiting time on hospitals.

Keywords:

Apache spark, Big data, Cloud Computing, Hospital Queuing Recommendation, Patient Treatment Time Prediction.

Power Management Techniques and Its Impact in VLSI design

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Abstract:--

Appropriate innovation choice is one of the key parts of energy administration. The objective of every innovation headway is to enhance execution, thickness, and power utilization. The average approach in building up another age of innovation is to apply steady electric-field scaling. Process originators scale both the connected voltage and the oxide thickness to keep up a similar electric field. This approach diminishes control by around half with each new innovation hub However, as the voltage gets littler, the threshold voltage additionally should downsize to meet the execution focuses of that innovation. This scaling sadly expands the subthreshold current and thus the leakage control. To beat this imperative, process builds never again apply consistent field scaling for procedures of 65 nm or littler; rather, they utilized a more summed up type of scaling.

A new Era in Additive Manufacturing Technology – 3D Printing

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Abstract:--

This paper deals with 3D printing and it is also called as desktop fabrication. It is a process of prototyping where by a structure is synthesized to from a 3D model. The 3D model is stored in as a STL format and after that forwarded to a 3D printer. It can use a wide range of materials such as ABS, PLA, and composites as well.3D printing is a rapidly developing and cost optimized form of rapid prototyping. The 3D printer prints the CAD design layer by layer forming a real object. 3D printing process is derived from inkjet desktop printers in which multiple deposit jets and the printing material, layer by layer derived from the CAD 3D data.

3D printing significantly challenges mass production processes in the future. This type of printing is predicted to influence industries, like automotive, medical, education, equipment, consumer products industries and various businesses.

Key words:-

ABS, PLA, Rapid Prototyping, 3D printing

Real time Object Detection using Tensorflow

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Abstract:--

In the progress of computer vision systems, Real time object detection has become an main topic in development. Creating the specific machine learning model which have the ability to recognizing and localizing many objects in a single image has become a main challenge in a Computer vision. By using advanced deep learning, object detection has become easier than before. The aim of project is to detect the object in real time with high accuracy by using Tensorflow. Tensorflow object detection API is the Google open source machine learning frame work that is easy to build, train and place the object detection. The object is trained using accessible data set. It is used to detect the object in videos as well as specific images. The result is fast and precise, thus helps those applications which demand object detection

Parasite zapper

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Abstract:--

The basic problem that humans are facing is the health problems, humans are Sensitive that even if they migrate from one place to another place there will be chance of health effect such as cold, fever, due to change in water and atmosphere. Even though the humans have immunity power to defense against these health problems, sometimes they may fail to fight against some health problems caused by some parasites or bacteria. In this case we need to activate the immunity power so that they can defeat against parasites and this can be done by the boosting the immune cells. The purpose of zapper is focused on health issues of human body as well as contaminated vegetables and fruits. The zapper kit is designed to fight against those problems on human body, vegetables and fruits. Parasites and bacteria can be kill when the electricity reaches But as it may be, a few areas that are not reachable, for example, tooth hole and within tumors. The current isn't uniform through the body. To overcome these problems we use zapper. It will beat these issues by giving frequency through the body.

Index Terms

ARDUINO, AD9833, DIGITAL POT, DC CONVERTORS.

Study of Mechanical Properties of Epoxy Based Hybrid Composites Reinforced with Glass Fibers & chopped glass fibers

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Abstract:--

Now-a-days, the glass fibers are potential fibers as a reinforcing material for polymer composites compared to the natural fibers. Among several fibers, glass fibers are most widely used fiber due to easy availability, low density, low production cost and having good mechanical properties. For a composite material, its mechanical behavior depends on many factors such as parentage fiber content, orientation of fibers , types, its length etc. In present research work attempts have been made to investigate the effect of fiber loading on the physical and mechanical behavior of glass fiber reinforced epoxy hybrid composite. A hybrid composite consists of two or more different types of fibers in which one type of fiber balance the deficiency of another fiber.

It has been found that there is a influential effect of fiber loading on the performance of glass fiber reinforced epoxy hybrid composites. The fabricated hybrid composites undergo different kinds of tests such as Hardness, Flexural, Tensile. The result shows hybrid composites having good strength and stiffness

Effect of T6 type heat treatment on mechanical characterization of Al6061/Fe_2O_3 composites

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Abstract:--

In recent era, Aluminium based alloy metal matrix composites (MMC) are acquisition wide spread recognition in various aerospace and automobile devices. In the present study, the results of Mechanical characterization for Al6061 reinforced with Fe_3O_3 up to 0-6 wt% were prepared with the help of stir casting method. The cast matrix alloy and its composites are subjected to a solution zing treatment at a temperature of 530 ± 200C for 1 hour, followed by ageing at a temperature of 170 ± 200C for 6 hours. The mechanical characterization of as cast and T6 heat treated composites are checked as per ASTM standards and compared. Addition of Fe_2O_3 particulates into the Al6061 matrix improved the hardness and strength but reduces its ductility of the composites. In Al6061composites the sufficient improvement in hardness & tensile strength are not detected as the Wt% of Fe_2O_3 increases. The results also reveals that the there is enhanced in the mechanical characterization of heat treatment specimens. The homogeneous allocation of Fe_2O_3 particles in matrix composites is released by micro structure studies.

Key Words:

Key words: Al6061, Fe_2O_3, T6 type heat treatment, Yield strength

IOT SMART LOCK

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Abstract:--

In this paper, we use smart door locking system. We use Raspberry pi, pi camera to capture the image, GSM module. We use this is develop the smart door automation using the hardware like Raspberry pi and the GSM module. Raspberry Pi detects the motion and camera acts like a sensor. It captures the unauthorized persons picture. We use python programming for the operation of the raspberry pi. We use a software that displays how many times the door is locked and unlocked, and at what time the door is locked and unlocked.

Index Terms-

Internet of Things [IOT], Raspberry pi3, Pi Camera, Mobile device, Home Security.

Implementation of kanban system for inventory control and performance improvement: A Case Study

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Abstract:--

Lean manufacturing has been the buzzword in the area of manufacturing for past few years. The Kanban system is one of the manufacturing strategies for lean production with minimal inventory and reduced costs. The study is carried out at Chiller manufacturing industry from one of the leading manufacturers of cooling systems. This study considers eight different variants of models ranging from 0.5TR-5Tr.The objectives of this study are 1) to determine the number of Kanban cards required to meet the worth of materials and 2) to reduce the burden on the target stores. The focus of this approach is to eliminate non value added activites. A kanban card is developed which shows the batches of pre designed capacity ,quantity consumed and quantity replenished periodically. The results shows the reduced inventory levels and also increased productivity and efficiency.

Keywords:--

Kanban system, operation strategies, vendor participation

Minimising the Energy Constraints for Implementing Green Cloud Storage in Cloud Computing

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Abstract:--

Cloud based services ranging from servers, storage solutions, business applications, Software-as-a-service and Infrastructure-as-a-service – will all contribute to leveraged IT management leading to decreased e-waste illustrating a direct correlation between cloud computing and going green. A Microsoft Study showed in whitepaper gives further evidence that cloud computing helps companies move in the direction of being ecofriendly and green. Cloud computing and its obvious advantages are hard to ignore: decreased costs, enhanced efficiencies, optimized data centre management, better application performance, environmental friendliness, increased capacities and flexible provisioning. The users submit their Cloud service requests in the green cloud architecture with the help of a new Green Broker a middleware that manages the selection of the greenest Cloud provider to serve the user's request. This paper deals with the issues involved in implementing the Green cloud storage architecture and providing the cloud services to the user in ecofriendly environment

Keywords :

DataCenters, Directory, Green Cloud, Green Broker

Blockchain Based Biometric Secured Voting System

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Abstract:--

The voting system is a process of electing the right candidate for the development of any government and organization .There are various voting techniques used such as Paper Ballot Voting System, E-Voting System also known as Electronic Voting System, Internet Voting System, SMS and Miss Calls Voting System . In this paper, we are going to discuss the open source Blockchain technology to propose a design for a new online voting system using biometric that could be used in all kinds of elections .The Blockchain-based system will be secure, reliable, and anonymous, and will help increase the number of voters since it provides remote voting as well as the trust of people in their governments and organizations.

Keywords –

Blockchain, Biometric, online voting system

Mechanical Properties of Friction Stir Processed Copper Alloy Reinforced With SIC_p and Gr as Filler Material

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Abstract:--

Friction stir processing (FSP) is most promising technique used to enhance ductility and induces super plasticity and thereby improve corrosion resistance properties. FSP has been applied to various cast aluminum and magnesium and copper alloys successfully to reduce casting defects and also improve their mechanical properties.

Literature Review study different paper has been presented. In present study the copper alloy is reinforced with Silicon carbide and graphite powder as filler material for friction stir process. There is various process parameters have been considered such as tool geometry, tool rotational speed, processing speed and axial load for the study. From the experimental research work it has been identified that as the speed increases more will be the uniform distribution of the filler particles along the length of weld for 710 rpm and Cu+90% SiCp + 10% Gr specimen give very good strength. They also found that for 900 rpm travers speed with Cu+80% SiCp + 20% Gr specimen has more value of hardness at the stir zone as compard with 710 rpm.

Key words:

Friction stir processing, filler material

Literature Review on Mechanical properties of Natural fiber reinforced concrete

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Abstract:--

The present experimental investigations is to evaluate the flexural behavior and mechanical properties of low volume natural fibers reinforced concrete of M40 grade with water to cement ratio of 0.4. The natural fibers such as jute, pineapple, steel and sisal fibers with low volume fractions of 0.25%, 0.5% and 0.75% with 22mm and 30mm length of each fiber are used for this investigation. The workability properties of concrete are demonstrated by the test such as slump test, compaction factor. Mechanical properties like compressive, flexural, tensile and shear strength, young's modulus and impact resistance was conducted for 28days with water curing. From the literature review, it observed that mechanical properties like compressive, tensile, flexural strength, young's modulus, shear strength and impact resistance were increased with increasing in the percentage of fibers.

Keywords:
Sisal fiber, Jute fibers, pineapple fiber, split tensile strength, compressive strength, flexural strength, Impact resistance, young modulus, shear strength.

Maximum Demand Metering Using IoT

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Abstract:--

The paper mainly works on IOT network. The conventional energy meter need to be converted into digital meters from electromagnetic meters, then meter reading will come faster. The KPTCL and customers can be made available with these meters. The information can be used by both the user and KPTCL provider for various purposes, like to check the tapering, the bill, when the meter is disconnected and connected within in the dye date. All this information will be displayed by using smart app. In this paper we will monitor the tampering i.e. seat tampering of meters and we read the meter bills that will be uploaded on the website using IOT devices and network. The paper aims at providing infrastructure of energy meters which can be used in smart city concept.

Anti-Aircraft Collision System Using Arduino Uno

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Abstract:--

Recent incident in aircraft navigation in air and on ground,resulted in loss of lives of high profile citizens.so there is a need for anti collision system. Air traffic collision avoidance systems are based on using data supplied by external sources and internal sources,but the pilot has ultimate responsibility for air collision prevention. This project aims on the use of zigbee module which is connected to the arduino uno board and the signal from the zigbee sends to the receiver if any obstacle is detected by the zigbee transmitter. Then the "object is detected" message will displayed on the LCD screen ,buzzer will activated.by this pilot can take certain measurements. when aircraft moves away from object" safe mode "message will displayed on the LCD screen,buzzer sound turned off. All these conditions are reported to the ground station over IOT.

Key words -

Arduino UNO, Zigbee ,IOT,LCD screen

Fabication and Analysis of CNC Laser Engraving On Different Materials

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Abstract:--

Engraving is special art of carving of design on harden surface. It is advance and recent technology which uses the laser to imprint shapes and designs on materials what you needed to engrave. Basically it used for industrial applications like in schools, small scale business and hobbyists. Laser engraver works on directing the High Power Laser beam through optic on materials. In laser engrave method two ways one is by cutting material and other is without cutting by simply changing the color. A commercial laser beam is utilized for engraving materials would follow G-Code and M-code program of the pattern followed by the CNC movement control system to cut on to the material. The high intensity laser beam is deliberated on the material surface, it is then burns, melts, or vaporizes and gives high quality surface finish.

In present work the CNC LASER engraving is used to engrave for different materials like wood, aluminium and sheet metals and also composites has been conducted. There are several parameters such as Intensity of Beam, cutting depth and impregnations are used. From this work wood material gives best engrave on material surface for the depth of 1 mm and high quality surface finish.

Keywords:

CNC LASER engraving, LASER engraving machine, Engrave, G-Codes and M-Codes

Analysis of Split Ring Resonator for Metamaterial Antennas

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Abstract:--

Metamaterial structures have found applications in antennas. In this paper a split ring resonator is analyzed for use in software defined radios and cognitive radios. A split ring resonator is designed and simulated in CST. The dimensions of the inner and outer ring are varied and tested in CST EM tool. It is been observed that the resonant frequency shifts to higher value with reduction in the inner ring size and total structure size. Meanwhile the SRR exhibits dual band resonance with large bandwidth. An array of two SRRs is also simulated. The results show dual bands, one at 5.66 GHz and other at 8.64 GHz. Such Metamaterial antenna finds applications in cognitive radios for free channel allocation from TV white spaces satellite microwave channel bands.

Keywords:

Cognitive radio, CST EM tool, Metamaterial antennas, Split Ring Resonator.

An Improved SPIHT Algorithm for Image Compression in Low Bit Rate

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Abstract:--

Aiming for lack of the SPIHT algorithm , an improved image compression algorithm is proposed, in order to overcome the deficiencies of unraveling image quality and coding time, LS9/7 lifting wavelet change is embraced. According to the attributes of the human visual system (HVS), the examining mode and the technique to decide the threshold of algorithm are changed to improve the quality of reconstruction image. On the subject of rehashing sweep of SPIHT algorithm , utilizing maximum list thought, incredibly diminish the computation and spare working time. The experimental outcomes have demonstrated that the improved algorithm of image decoding time and the quality of reconstruction images are superior than the original algorithm,especially in the case of low bit rate.

Keywords:

Image decoding, SPIHT algorithm.

Comparitive Analysis of Beam Forming

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Abstract:--

To provide effective communication among the mobile users, interference has to be reduced to maximum extent. Reducing the interference plays a major role in providing effective communication among mobile users. By using smart antennas we can increase the capacity and coverage area of wireless sensor networks. By increasing the capacity and coverage area it is possible to provide line of sight communication and continuous coverage of network for remote users .By using Adaptive Beam forming (ABF) algorithm we can direct the arrays beam in the desired direction at the same time nullifying the interference signal. This paper depicts the methods for formation of beam which decreases the computational complexity of conventional LMS algorithm, and for the first time applied to smart antenna system by newly proposed signum algorithm.

Keywords:

Least Mean Square, Beamforming.

A Complete Wireless Charging Model

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Abstract:--

This project is a jump to future technology. The main objective of this project is to simplify the complexity of charging a Smartphone. We mainly emphasis on usage of zero wired charging, it means that one can carry this charging model wherever they go and whenever necessary can keep in touch with one end of this charger on any conducting surface with a power supply switched on such as inverters, CPU, surface of a car battery, so on and the other surface below a Smartphone. This works on a phenomenon of Electromagnetic induction, Metamaterial, Radio frequency wave transmissions. Transmission of electrical energy can happen even through a non conducting medium such as air. Although our project provides a means of transmission either by a conducting or non conducting surface. This will rather be one of the most loved inventions. However there are many wireless chargers out there but the electricity is however provided from a power supply through a wired media to a charging pad which still is another kind of wired transmission of power. Therefore by using this project's paper presentation can provide a very vital role in developing a complete wireless charging model.

Automatic Bio-Degradable Waste Recycler Management

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Abstract:--

The smart cities must be built with basic infrastructure and technologies to provide good comfort for living and the better ambiance. More clean and hygienic environment must also be assured as an important part of a smarter life. As the waste is spread all over the surroundings, all the waste is dumped on streets and this becomes a major problem for different types of disease causing bacteria and viruses thus waste management is of very much important. To solve all these problems of the environment, we have designed a project named "Automatic Bio-degradable Waste Recycler Management" by using WIFI. Here, the dustbin will be fixed with the blades and will be fixed with the blades. In this dustbin, the less cost embedded devices which give the status of dustbins whether the garbage is filled or not and that information will send to the android app using WIFI. Also, this system will give information about dust whether dry or wet. The system provides an android app so that the user can get all the updates of the dustbin.

Keywords:
Arduino board, WIFI module, IR sensor, a Soil sensor, etc.

CMOS Successive Approximation ADC Used In Active Pixel Sensor On-Chip

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Abstract:--

Recent advancements in CMOS image sensor technology are reviewed, including both passive pixel sensors and active pixel sensors. CMOS active pixel sensor (APS) with on chip column-parallel successive-approximation analog-to-digital converter (ADC).Active pixel sensor consists of pixels that converts the incoming light in to a charge. A CMOS imaging sensor uses active pixel sensor (APS) technology where charge to voltage conversion is carried out on the pixel itself .In this active pixel sensor technology the voltage generated by each pixel is in line by line fashion ,Initially the first row and first column is activated and we can read the data and so on . The system integration is very similar to the integrated circuit we can integrate the peripheral components on to a single chip using ADC, requires single power supply typically 3.3v to 5v and consumes less power. This method can also used to increase high speed, low noise and low sensitivity as the amplifiers used are not identical.

Heart disease prediction using Machine Learning algorithms on medical dataset

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Abstract:--

Prediction and diagnosing of heart disease become a challenging factor faced by doctors and hospitals both in India and abroad. In order to reduce the large scale of deaths from heart disease, a quick and efficient detection technique is to be discovered. Data mining techniques and machine learning algorithms pay a very important role in this area. The researchers accelerating their research works to develop a software with the help of machine learning algorithm which can help doctors to take decision regarding both prediction and diagnosing of heart disease. The main objective of this research paper is predicting the heart disease of a patient using machine learning algorithms. Comparative study of the various performance of machine learning algorithms is done through graphical representation of the results.

Keywords:

Detection technique, Data mining technique, machine learning technique, machine learning algorithm.

Sentiment Prediction and Summarization

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Abstract:--

In rapidly developing world, various fields are emerging out vigorously in their own grounds of progress. One among such fields is "shopping". Now days, people are so busy that they can't invest their time even to get out and shop manually. This is the main reason for the birth of a unique and new concept called 'Online-shopping'. But the problem is that the people are unable to judge every feature of product and even they are not able to read bulk reviews which make them biased. This project concentrates on giving concise summary of feedbacks based on product features to overcome the above trouble. For feature extraction and summarization, natural language processing is used. The polarity of all reviews is determined by classification algorithms such as SVM, Multinomial naïve baye's and KNN. This project also implements fuzzy method which adds value to the project.