ICASET-19

International Conference on Advances in Science, Engineering and Technology

Kadapa, Andhra Pradesh

19th - 20th December, 2019

Organized by:

KSRM College of Engineering (Autonomous) (KSRMCE)

&

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)*** and in association with ***KSRM College of Engineering (Autonomous),*** Kadapa, Andhra Pradesh. I am delighted to welcome all the delegates and participants around the globe to ***KSRM College of Engineering (Autonomous), Kadapa, Andhra Pradesh*** for the ***"International Conference on Advances in Science, Engineering and Technology (ICASET-2019)"*** Which will take place from ***19th - 20th December'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 & KSRMCE)** 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 ***Kadapa, Andhra Pradesh***

Sincerely,

Rudra Bhanu Satpathy

Preface

The ***"International Conference on Advances in Science, Engineering and Technology (ICASET-2019)"*** is being organized by ***KSRM College of Engineering (Autonomous),*** Kadapa, Andhra Pradesh in Association with ***IFERP-Institute for Engineering Research and Publications*** *on the 19th – 20th December, 2019.*

KSRM College of Engineering (Autonomous) has a sprawling student –friendly campus with modern infrastructure and facilities which complements the sanctity and serenity of the major city of Kadapa in Andhra Pradesh.

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

The International Conference attracted over 193 submissions. Through rigorous peer reviews 76 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.

ICASET -19

Message from Chairman

Sri S. Sankar Reddy, B.A

Chairman

On behalf of the International Conference on "Advances in Sciences, Engineering & Technology (ICASET-2019)" from December,19- 20, 2019, I welcome all the intending participants of ICASET-19 has really brought together a tremendous and rich diversity of authors and speakers from universities, engineering colleges and industry around the globe to share ideas and new perspectives on a wide range of communications, engineering and computing research and technologies, addressing new technical and business issues essential to advancing today's engineering and technological environments. I would like to extend my most sincere congratulations to the authors and speakers for their contributions. It is their efforts and vision which provided the impetus to put together this outstanding technical program. I hope that the conference will be stimulating, informative and enjoyable to all who attend it.

Message from Correspondent

Sri Sivananda Reddy, **Ex-MLA**

Correspondent

This is exciting to know that Centre for Research and Innovation (CRI), KSRM College of Engineering is holding "2-day International Conference on Advances in Sciences, Engineering & Technology(ICASET-2019)" from December,19-20,2019. Providing platform to scholars in contributing towards new knowledge in Sciences, Engineering & Technology is going to play a major role in creation and sharing of knowledge in relevant fields. Throughout this conference, I would ask everyone to stay engaged, proactive and contribute towards shaping the future of our generations. My personal respect and thanks goes out to all of you. I wish you all a very fruitful and rewarding conference.

Message from the Director

Prof. A. Mohan

Director

Kandula Group of Institutions

It gives me great pleasure to send you a very sincere message of support and good wishes at Centre for Research and Innovation (CRI), KSRM College of Engineering is holding "2-day International Conference on Advances in Sciences, Engineering & Technology(ICASET-2019)" on December,19- 20, 2019. I am highly indebted to the better team work between the staff of KSRMCE and collaborating with IFERP for this successful mega event and hope that the conference participants will deliberate on important issues faced by our country. More networking and collaboration will come forward as result of this interaction of academia, researchers, entrepreneurs and other major stakeholder involved in higher education and research. The ICASET-19 is a platform, where researchers and practitioners openly exchange ideas and report progress in the exciting area of communications and networking. We greatly value the participations and look forward to the insightful vision and thoughts of the invited speakers.

I look forward for your convenient stay with us and hope that you will actively participate in upcoming events.

Message from the Principal

Prof. V.S.S. Murthy

Principal

KSRM college of Engineering

It is undeniably a great pleasure for me to know that Centre for Research and Innovation (CRI), KSRM College of Engineering is holding "2-day International Conference on Advances in Sciences, Engineering & Technology(ICASET-2019)" from December,19-20, 2019. I extend my warmest wishes to all organizing members and participants. In many ways, this is not only a favorable event to reflect and think on contemporary challenges and future prospects in the fields of Sciences, Engineering and Technology, but also an appropriate time to consider how this Conference can contribute to the advancement of this fast developing global community. I would be most grateful if this Conference could further promote society through development of emerging technologies. The Conference theme will provide an ideal opportunity to reflect upon the many contributions that multi-disciplinary coalition-building, understanding and intercultural gathering can provide in identifying effective solutions to global crises and challenges of science and technology and also relate it to our indigenous scenario. With the warmest wishes for your success!

Message from the Convener

Dr. M. Venkatanarayana

Dean of CRI & Professor of ECE

KSRMCE

The Centre for Research and Innovation (CRI), KSRM College of Engineering is holding "2-day International Conference on Advances in Sciences, Engineering & Technology (ICASET-2019)" from December, 19-20, 2019. My message is about lifelong "learning and development". Staying in touch with fresh and emerging evolutionary developments of Engineering and Technology is essential.

Today's challenge is to create a new technological world based on our values. We must continue to learn from each other, as we are all in this together, challenged with advancing the great transition in technologies and social life. I wish you all a very fruitful and rewarding conference.

ICASET-19

International Conference on Advances in Science, Engineering and Technology

Keynote Speaker

Dr. Ande Murali Varaprasad
Professor & Director CIGS
Email: directorcigs@cigssacet.in

Lett No.: CIGS/ICASET-19

Date: 5 December 2019

KEYNOTE MESSAGE

It is indeed great pleasure for me to be the keynote speaker at the International Conference on Advances in Science, Engineering and Technology : **ICASET-19** organised by KSRM College of Engineering, Kadapa on 19-20 December, 2019 in association with Institute for Engineering Research and Publication (IFERP). I am confident that this conference forms the perfect setting for the students, engineers, scientists, professionals, academicians to meet and exchange ideas and hold professional discussions on promoting India to achieve the status of a Developed Nation soon, a goal set by the Creator of Dreams : Missileman of India, Dr APJ Abdul Kalam. I congratulate the IFERP for inspiring the younger generation by organizing world class conferences in the Institutions in India and abroad.

21 century is a century of knowledge management. The amount of information available through research is enormous and it exceeds the capacity of individuals. We must learn how to manage knowledge collectively to enable creativity and innovation. Recent achievement of Chandrayaan-1 & 2, DRDO's 'Shakti' stands as examples of collective effort and fusion of knowledge possessed by scientists belonging to ISRO and DRDO. The credit goes to the man behind this notable achievement Dr G. Satheesh Reddy, and fondly known to the scientific community as Missileman Jr and Chairman of ISRO Dr G. Sivan. Incidentally, Dr Satheesh Reddy hails from nearby place close to us Mahimaluru, Nellore District. This gives an additional inspiration to the students of KSRMCE. Also, the SPACE PORT OF INDIA i.e. SHAR of ISRO is also closer to Kadapa. Taking advantage of its proximity to world class institutions like SHAR, Students of KSRMCE have immense opportunity to raise and participate in world class innovation and research. Students can register online and watch launching of satellites on Polar Satellite Launch Vehicle PSLV C-49, if anyone missed the opportunity during the PSLV C-47 and C-48. Students should be encouraged to get inspired by viewing live satellite launchers. Dr. APJ.Abdul Kalam often emphasized that our students and faculty should have the capacity to use latest technologies and high Technologies.

I foresee the young engineers and faculty participants will direct their energies to make India a developed nation within a decade. On this occasion, I extend my best wishes for the success of the conference.

AMVaraprasad

ICASET-19

International Conference on Advances in Science, Engineering and Technology

Kadapa, Andhra Pradesh, 19th - 20th December, 2019

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ICASET-19

International Conference on Advances in Science, Engineering and Technology

Kadapa, Andhra Pradesh

19th - 20th December, 2019

ABSTRACTS

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Organized by:

KSRM College of Engineering(Autonomous) (KSRMCE)

and

Institute For Engineering Research and Publication (IFERP)

International Conference on Advances in Science, Engineering and Technology

Kadapa, Andhra Pradesh, 19th & 20th, December 2019

Optimal Allocation of Multiple DSTATCOM in Distribution Network Using Chaotic WOA

Sakthi Gokul Rajan.C, School of Electrical Engineering, VIT, Vellore, Tamil Nadu, India
Ravi.K, School of Electrical Engineering, VIT, Vellore, Tamil Nadu, India

Abstract:--

In this literature, in order to reduce the system power loss and improve its voltage stability Distribution static compensator(D-STATCOM) are placed in both 28 and 69 bus Radial distribution systems(RDS). Most effective Chaotic Whale Optimization Algorithm (CWOA) is used for the Sizing of D-STATCOM. The candidate location of the DSTATCOM is identified using the Voltage Stability Index (VSI) value. The performance of the proposed method is compared with the performance of the existing method.

Keywords:--

Chaotic Whale Optimization Algorithm, DSTATCOM, Power loss minimization, Voltage Stability Index.

Hydrological Analysis for Construction of Bridge

Pramod kumar Gangadhar, Kaunas University of Technology
Ranjitha, Kaunas University of Technology
Sandesh Mysore Sathyaraj, Government Engineering College Hassan
Vasanth Selvam, Kaunas University of Technology

Abstract:--

Hydrological analysis is a important component for design of bridges that cross water courses. This is not necessary for under passing of bridges as they do not convey water. Because of the importance of hydraulics in the performance and safety of most bridges. The hydraulic design is the process for sizing of the bridge waterway opening will include the evaluation of water surface in the main channel for present conditions and for particular conditions. A comparison of the elevations between these two conditions shall be made to identify the effects of the bridge on the waterway. Hydrological investigations are the preliminary studies which shall be carried out and they are highly important during design and construction process. This study focused on carrying out of necessary hydrological investigations, such as estimation of probable maximum discharge, design discharge corresponding to storm event with different return periods and scour information and calculation. By the use of catchment area the design discharge is calculated in different methods. Main aim of this proposed bridge is planned to connect the villages of Rudrapattana and Basavapattana side and there will be saving in travel distance of over 15-20km for villagers, which is the main connecting road for surrounding area.

Keyterms:--

Discharge, Hydraulic Survey, Scour Depth, Topographic Survey.

Conceptual Frame Work of a Micro Finance Institution in India - A Case Study

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Dr. M. Sugunatha Reddy, Professor in H & S, K.S.R.M.C.E (Autonomous), Kadapa, A.P, INDIA

Abstract:--

Micro finance institutions have been evaluated and in corporate through financial mechanism proved to success in India. The goals of micro financing in to provide strengthen financial significance to invest in themselves of their business. In many instances, people seeking help from micro finance organization. Firstly they required to take a basic money-management class. In this class they have learn the concept of cash flow, savings account work, make a good budget and manage debt activity. In this paper a healthy and profitability lending business through good relationship with select micro financial institution (MFI) and investing in building deeper and concurrent monitoring and control mechanisms to enable healthy growth of the micro finance sector in India.

Medical Image Fusion Algorithm Based on Weighted Local Energy Motivated PAPCNN in NSST Domain

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Dr.D.Satyanarayana, Professor, Department of ECE, RGMCET, Nandyal, India
Dr. M. N. Giri Prasad, Professor, Department of ECEm, JNTUA College of Engineering, Ananthapuramu, India

Abstract:--

Medical image fusion has developed as a powerful method in applications such as diagnosis of vascular disease, tumor detection, surgical navigation and treatment planning. In this paper, a new multimodal medical image fusion method based on weighted local energy motivated parameter-adaptive pulse coupled neural network model in NSST domain is proposed. A K-level NSST decomposition is applied on source images to get their corresponding high and low frequency bands. The maximum selection rule is used to fuse low frequency coefficients. The high frequency coefficients are fused by weighted energy motivated PAPCNN. Finally, fused image is reconstructed by performing inverse NSST on fused coefficients. The quality metrics, such as standard deviation (STD), information theory based metrics QTE, QNCIE, QMI, and image feature based metrics QP, QG are used to verify the quality of the fused image and to evaluate the performance of proposed method.

Index Terms—

Medical image fusion, weighted local energy, non-subsampled shearlet transform (NSST), parameter-adaptive pulse coupled neural network (PAPCNN).

Experimental Investigation on Various Grades of Self Compaction Concrete by Partial Replacement of Glass Powder in Fine Aggregates

Dr. V. Ramesh Babu, Assistant professor, Dept of Civil Engineering, K.S.R.M College of Engineering, KADAPA, AP

Abstract:--

Self - compacting concrete (SCC) is a high - execution strong that can stream under its own one of a kind burden to absolutely fill the shape work and self-hardens with no mechanical vibration. Such bonds are an animate for the situation, to diminish the work essentials required for blend, finishing and abstain from environmental defilement. This will ensure that the strong got has incredible stream limit, self-compacting limit and other needed SCC properties.

The European Federation of Producers and Applicators of Specialist Products for Structures (EFNARC) [2005] have furthermore set out explicit principles for fresh properties of SCC. In this assessment the basic point is to concentrate on the likelihood of utilizing current result as a waste material in a planning of imaginative cement. One sort of waste was seen as Glass Powder (GP). The use of this Glass Powder is the halfway substitution of fine total and security was proposed in various rate for period of self-compacting concrete. The starter work manages the part of these blends (Glass powder, super plasticizer, and join) to overhaul the quality by looking at their particular occupation in self-compacting concrete.

Index Title –

flow ability, Glass Powder, super plasticizer, strength.

Estimation of Precipitation using CNN

Dr. M V Rathnamma, Associate Professor, Dept. of CSE, KSRMCE,KADAPA-AP
Dr. A.V.Sriharsha, Professor, Department of Computer Science and Engineering, Sree Vidyanikethan Engineering College (Autonomous), Tirupati
Dr. V Venkata Ramana, Professor & HOD, Dept of CSE, CBIT,Proddatur, Kadapa-ap
Dr. M Sreenivasulu, Professor,HOD, Dept of CSE, KSRMCE,KADAPA-AP

Abstract:--
CNNs solve many complex problems related with huge and uncertain data. The network architecture of the CNNs are designed to handled situation specific problems in order to alleviate the problems with the indefinite results of conventional experiments. Precipitation estimation is a key element of the atmospheric modeling, where it requires meteorological agreement providing scalar data. CNNs are applied to discretize the problems of atmospheric equations. A CNN model for Precipitation estimation using statistical downscaling is proposed with precipitation-related parameterization schemes for numerical precipitationestimation. A single geogrid experiment is performed and the results are assumed for the dynamical snapshot of the atmosphere for a day. The study contributes two aspects: a new model to enhance numericalprecipitation estimation; CNN model for improvingprecipitation-related parameterization schemes using a data-driven approach.

Keywords:
Atmospheric modeling, precipitation estimation, convolutional neural network model, integration of statistical downscaling in learning.

Ground Water Recharge through Subsurface Dams and Its Application – A Case Study in Kadapa District

Dr.T. Kiran Kumar, Professor, Department of Civil Engineering, K.S.R.M. College of Engineering (Autonomous), Kadapa, Andhra Pradesh

K. Nivedhitha, sst. Professor, Department of Civil Engineering, K.S.R.M. College of Engineering (Autonomous), Kadapa, Andhra Pradesh

U Ramesh, Executive Engineer, Annamayya Project, Irrigation Department, Kadapa, Andhra Pradesh

Y. Thejovathi, Assistant Executive Engineer, Annamayya Project, Irrigation Department, Kadapa, Andhra Pradesh

Abstract:--

The Kadapa district has an extent of 15359 sq.km and lies between the north latitude 13.43' and 15.14' and east longitudes 77.55' and 79.29' with a mean temperature of 27C. The mean rainfall at Kadapa rain gauge station is 759mm. The phenomenon of Kadapa district is in the grip of water scarcity. Hence there is necessity for construction of water harvesting structures to conserve water. A sub surface dam is a system to store, to divert and to slow down the sub surface flow of water by providing a sub surface dam across a river beneath the sand bed. Due to intensive application of surface water for different purposes and having scanty rainfall, the increase of ground water usage has become mandatory as such the ground water has gone to the deepest in a course of time which requires recharge of ground water by providing certain structures through which the ground water will be charged in that region. The construction of sub surface dam is one among them in the region where the sandy rivers are available with no flow of river water.

As a case study, to provide drinking water supply to Nandalur town on the bank of river Cheyyeru in Kadapa district which comes under the rain shawdow area experiencing severe water problem after the construction of Annamayya Project dam, having a population of 5,481 (as per 2011 census). To overcome the water crisis which is proposed to construct a Sub surface dam across the river Cheyyeru near Nandalur to recharge the depleted ground water in and around Nandalur to an extent of 0.1TMC. As a part of the scheme an Over head service reservoir is also proposed to construct and the distribution network is also proposed to construct for the entire town to facilitate drinking water for the entire town

Index Terms—

Subsurface dams, Ground water Recharge.

Helmet detection and monitoring for two wheeler rider using Advanced Machine Learning based automated model

D. Arun Kumar, Machine Learning group of Center for Research and Innovation, Department of Electronics and Communication Engineering, KSRM College of Engineering, Kadapa, Andhra Pradesh

G. Hemalatha, Department of Electronics and Communication Engineering, KSRM College of Engineering, Kadapa, Andhra Pradesh

Abstract:--

Most of the two wheeler riders forget to wear helmet at the time of driving. As a result when an accident occurs, there are high chances of head injuries to the riders which sometimes results in death. Conventional methods of detecting and monitoring the rider's helmet during driving are limited to certain conditions like orientation of rider and the two wheeler. To overcome the limitations of conventional methods of detecting two wheeler helmet, a neural network based automated model is proposed in the present study. The proposed model can detect the helmet under varied conditions due to its properties like learning and generalization. The superiority of the proposed model over similar type of models is tested on the real time images which are acquired through automated model. The performance of the proposed model is evaluated using various parameters like user's accuracy (UA), producer's accuracy (PA), Kappa coefficient (KC), Overall accuracy (OA), average computational time (S).

Keywords –

Two wheeler, Helmet detection, Machine learning, Soft Computing and Neural Networks.

A Categorical Review of Dynamic Task Scheduling, Load Balancing, and Fault Tolerance Practices for Computational Grid

Sophiya Sheikh, Central University of Rajasthan
Mohammad Nayeem, Osmania University

Abstract:--

A computational grid is premeditated to process substantial computational applications. Numerous users residing at diverse geographical locations are requesting services from the grid architecture which possesses heterogeneous resources. This chapter presents a review of dynamic task scheduling (DTS) mechanisms, advance reservation techniques and fault-tolerant approaches those have already been recorded in the research to optimize distinct QoS parameters and grid architecture. Scheduling has already been proved as NP-complete in distributed systems. Therefore, many investigations have been nominated in the literature that can be classified into various categories of heuristics such as nature-inspired, dynamic, heterogeneous, job scheduling and load balancing, etc. Moreover, they are implemented for different kind of tasks for instance batch of tasks (BoT), priority based tasks, independent tasks, and workflow applications.

Index Terms

Computational Grid, Dynamic Task Scheduling, Fault-Tolerance, Advance Resource Reservation, Grid Systems.

Transformer Insulation degradation studies by Dissolved Gas Analysis

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T. KishoreKumar, Department of EEE, KSRM College of Engineering (Autonomous),Kadapa,A.P, India
P.Durgaprasad, Department of EEE, KSRM College of Engineering (Autonomous),Kadapa,A.P, India
A. Jyothirmayi, Department of EEE, KSRM College of Engineering (Autonomous),Kadapa,A.P, India

Abstract:--

The alternate liquid dielectric is the need of the hour. Several investigators tried with diverse of eatable and non-edible oils for the insulation and cooling of distribution transformers. Conventionally, standard test method is used for predicting the oil's electrical, physical and chemical properties. However, now days researchers are conducting a spectroscopic analysis of oil samples along with conventional test. Because of, spectroscopic analysis is best choice for evaluating tolerate ability of solid and liquid insulating material which can be used as insulating materials for transformer. The paper, critical study has been performed on transformer insulating oil by Dissolved gas analysis. From, the review found that DGA analysis is an essential method which is used to predict the stability of insulating material under up normal condition by evaluating gas emission form transformer oil sample, respectively. What is more, DGA is accurate and effective methods that of others.

Keywords:

Transformer, Liquid dielectrics, Biodegradable, Cellulosic Insulation.

Condition and Monitoring of Distribution Transformer using Thermal Imager

T.Mariprasath, KSRM College of Engineering (Autonomous)
K.Ramamohan Reddy, KSRM College of Engineering (Autonomous)
Neerati Siddhik, KSRM College of Engineering (Autonomous)
K.Kalyan Kumar , KSRM College of Engineering (Autonomous)

Abstract:--

Globally, uninterrupted electrical supply is required for smooth running of industries and day to day life activity. Because of the few minutes of outages causes huge revenue loss, poor quality and major accidents. To prevent these phenomena, a continuing condition and monitoring technique is required. In this paper, we propose a method to assess the state of the machine without interjecting the production or service. This is achieved by thermal imager. It is capturing the thermal image of the electrical machines which is used to access the state of the machine. According to the color of thermal image of the machine we can easily find weather machine is working satisfactory or not. Also, before going to burn out or damage we can make a preventive based maintenance very easy manner. The paper we conducting condition monitoring of transformer by using thermal imager. From the case study we can found that thermal imager is best tool for asses the transformer status very effective manner.

Index Terms-

Distribution Transformer, Condition and monitoring, Thermal image, fault identification

Optimization of turning operation on Mg alloy (Az91) and Al alloy (64430) using Taguchi method

Dr. B. Sudarshan, Associate Professor, Department of mechanical engineering. K.S.R.M.College of Engineering (Autonomous), Kadapa, AndhraPradesh, India

Dr.D.Ravikanth, Professor, Department of mechanical engineering. K.S.R.M.College of Engineering (Autonomous), Kadapa, AndhraPradesh, India

Abstract:--

CNC Machine devices are broadly utilized by Manufacturing specialists and skilled operators, to set up assembling forms rapidly and viably for new products. The experiments for the utilization of Taguchi method for parametric investigation of CNC turning activity for surface hardness and material expulsion rate as a reaction variable. The Taguchi Technique is a productive exploratory strategy, in which response variable can be considered, utilizing less trial runs than a Factorial design technique. The control parameters for machining operation are, Feed Rate (VF) Depth of cut (DOC) and Spindle Speed (N). A couple of trial runs are to lead utilizing a symmetrical cluster, and the perfect mix of controllable factor levels will be resolved for the surface hardness (Ra) and material removal rate, cutting parameters and utilizing numerous direct relapses, and scientific models identifying with Material Removal Rate (MRR) and surface roughness (Ra) examine the influence of cutting parameters during turning operation.

Key words :

CNC lathe, Production strategy, TAGUCHI method, Effectiveness.

An Analysis of Performance of Multidimensional Stock Exchange Data using k-means Clustering

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Dillip Kumar Swain, Department of CSE&A, IGIT Sarang, Odisha, India

Abstract:--

Multidimensional databases are used mostly for Online Analytical Processing (OLAP) and data warehousing. These can be used to show multiple dimensions of data to users. A multidimensional database is created from multiple relational databases and these relational databases allow users to access data in the form of different queries. These multidimensional databases also allow users to ask analytical questions related to business or market trends. The multidimensional database uses multidimensional online analytical processing to access its data. The stock market is one of the most unpredictable place in this world which directly or indirectly attracts many eyes due to its sensitivity and direct market involvement. There are several analytical systems to analyze this type of huge amount of data. Clustering of these types of data is more popular to analyze these data to carry out various researches and to produce meaningful result. The data in multidimensional databases is stored in a data cube format. This means that data can be seen and understood from many dimensions and many perspectives. A K-means clustering technique is one of the popular techniques for the clustering of these data to calculate the essentiality and the diversity of various clusters. K-means clustering is the simplest and popular unsupervised machine learning algorithms in which the K-means algorithm identifies k number of centroids, and then allocates every data point to the nearest cluster, with keeping the centroids as small as possible. The stock exchange data are different from each other by their uniqueness, so each data should be assign to the particular cluster so as to reach an optimized result. The stock exchange data analysis provides the price and demand of a particular product as well as the market trend of a company. It also provides the shares value as well as historical trends of various company and products. In this paper we have applied k-means clustering and linear regression basically for the market rate analysis and demand of Gold in India according to the price. This will provide information to merchants and share holders about the price and demand of Gold from time to time for various states in India to invest in Gold and purchase shares.

Key words:

OLAP, k-means clustering, multidimensional data set, Stock market, Centroids, Share holders, Linear regression.

Modelling and Analysis of Environmental Impact on Solar PV using MATLAB/Simulink

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M.Bhaskar Reddy , KSRM College of Engineering(Autonomous)
M. Saleha Tabassum, KSRM College of Engineering(Autonomous)

Abstract:--

Globally, the requirement of energy demand increased every year due to rapid growth of population and industrialization. Traditional fossil fuels are harms the environment, since it emitting CO and CO2 during extraction of heat energy. Hence, renewable energy resources are play a noteworthy part in generation of electrical energy. Renewable energy resources are namely, wind, solar, tidal et. Among them, the generation of electrical energy from solar PV technology has been increased in globally. Which is due to availability of solar energy is omnipresent. In this article solar cell characteristics has been modelling by MATLAB/Simulink block set. At first, a single solar cell has been modelling. Subsequently, PV array used to build a model. Both model is used to learning effect of temperature, irradiance on output of solar cells. This has been assessed through PV and IV physiognomies of solar cell. From the simulation found, depends of sun irradiation the yield potential of solar cell has been varied.

Keywords

Solar PV, Irradiance, Temperature, Shading Effect

Experimental Analysis of New Charge Controller for Solar PV Systems

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C.N.Arpitha, Department of EEE, KSRM College of Engineering (Autonomous),Kadapa,A.P, India
G.Hussain Basha, Department of EEE, KSRM College of Engineering (Autonomous),Kadapa,A.P, India

Abstract:--

Globally, abstraction rate of electrical energy has been increased from Renewable Energy Resource (RER). Because of, RER are ubiquitous, freely available and environmentally free. Besides, conventional fossil fuels are finite and also which are harming the environment. At present, the solar power plants are contributing more electrical energy that of others. Which is due to solar resources are available in a unique manner on all land areas as well as technically feasible. The heart of the solar PV system is charge controller which maintain the output of PV at desired level. Since it operating two modes such as buck and boost. According to the available solar irradiation it can operate. Hence, in this article proposed a new charge controller for PV system. The proposed system has a solar PV with capacity of 3W/6V, battery of 6V/4.5 AH. Moreover, the switching devices are made by MOSFET due to it offers very low switching loss. From experimental validation, the developed new charge controller working satisfactory.

Keywords:

Solar PV, Charge Controller, MPPT, Switching Loss..

An Analysis of Selected Stock in It Sector Based on Capm Model

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Abstract:--

In India securities trading mainly takes place in two important stock exchanges: the Bombay stock exchange (BSE) and the National stock exchange (NSE). Almost all the important company's stock in India are listed on both the exchanges. Different types of securities of companies like equity shares, preference shares, debentures, warrants, bonds, mutual funds etc are being traded in the stock exchanges. Investors use this platform for purchasing and selling of shares with the expectation of earning additional income out of it. Every investment involves two important factors: return and risk. There is no complete safe investment, therefore a certain amount of risk is inevitable in any kind of investment. A rational investor always looks for highest return at a minimum amount of risk. This paper is an analysis of risk and return of selected stocks in Indian IT sector based on the CAPM (Capital Asset Pricing Model) .CAPM model have been used to predict the stock price movement in the near future in order to give some valuable suggestions for the investors in IT sector to whether buy or sell the securities at this particular point of time based on the analysis.

Keywords:

Stock exchange, Investment, Return, Risk, CAPM Model.

Design of C-Shaped Rectangular Microstrip Antenna with DGS for Wireless Applications

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Abstract:--
This paper affords a C-Shaped Rectangular Microstrip patch antenna with DGS Structure which is worked up through an inset feed method. The proposed antenna is designed by means of ADS software program software and this is resonated at 2.6 GHz. Simulation results show that the designed antenna can be used as a single band mode. For the proposed antenna with DGS, the return loss (-13dB) and gain is 5dB are obtained and the 3-D pattern also described. This is best suitable for wireless applications.

Keywords—
C-shaped MPA, Radiation pattern, gain enhancement, ADS

Creating Irrigation Potential in Drought Prone Area through Lift Irrigation Project

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Abstract:--

Kadapa is basically an agricultural district and all its resources depend on the agricultural output. Farmers in upland area are raising raid fed crops which depend upon uncertain rains. Due to meager rainfall in the district, farmers are suffering with crop failures and shortage of fodder. Water play the most vital element in the plant life. Water is normally supplied to the plants by nature through rains. But due to insufficient and ill-timed rains there is a great need to make use of available water sources properly and efficient to the fullest extent for irrigation and other purposes.

The source like ground water and sub surface water can be extracted through tube wells, bore wells and infiltration wells. The surface source of water can be used through construction of dams, Reservoirs and Canal system and lift irrigation system. In lift irrigation and canal system the surface sources like lakes, rivers, small vagu etc., can be used and water will be lifted to the elevated points for irrigating up lands through distribution system.

In order to study the importance/necessity of creating Irrigation Potential by constructing a Lift Irrigation Project, it is proposed make a review on a Medium Lift Irrigation Scheme proposed on Kundu River near Vellala village, Rajupalem Mandal of Kadapa district. The scheme has been sanctioned by Andhra Pradesh Government to create an irrigation potential of 4525 Acres/1831 Hectares under Vellala L.I Scheme. The implementing agency of the scheme is the State Irrigation Development Corporation (APSIDC) with its Division office at Kadapa.

Key-words:

Irrigation, Command Area, Khariff Crop, Water Requirement

Automatic Extraction of Lung Regions using Border Repair in CT Scan

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Abstract:--

Extraction of lung regions is a preprocessing step in Computer-Aided Diagnosis (CAD) which helps in reduction of false positives in identification of lung carcinoma. The existing methods fail in segmentation of lung regions with the nodules at the pleura of the lungs. In this paper, a new method is proposed which extracts lung regions with nodules at the pleura of the lungs based on region growing, convex hull, XOR operations and morphological operations. The proposed algorithm is tested on 10 patient's dataset which consists of 50 images of Lung Image Database Consortium (LIDC) and the results are found to be satisfactory with 98.2% average overlap measure (AΩ)

Keywords

Border Repair, Lung Regions, Morphological Operations, Threshold, Region Growing, Convex Hull

A Study on Implementation of Insolvency and Bankruptcy Code (Ibc), 2016 and Its Benefits to Stakeholders

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Abstract:--

Non-Performing Assets (NPAs) or Non-Performing Loans are important and challenging issue in the banking sector nowadays. They have had a negative effect on the growth of Indian economy. It is quite uncontrollable which badly affects the health of banking sector and also economy of the nations. This has led to insolvency and bankruptcy. Insolvency is a state of affairs that activates the legal process of bankruptcy. Insolvency and Bankruptcy Code (IBC), 2016 came as a ray of hope which offers a great potential for a bright future of Indian economy with a strong corporate lending and investment culture. The code aims to strengthen the rights of creditors by giving them much needed remedy to take timely and effective action against defaulting borrowers.

The objectives of the paper is to highlight on the implementation of the Insolvency and Bankruptcy Code (IBC), 2016 and its benefits to stakeholders like banks and financial institutions, secured and unsecured creditors, Asset Reconstruction Company (ARC), Borrowers, Bond Market and employees. Based on the objective, research methodology has been adopted and statistical tools have been used with graphical presentation. To conclude, implementation of IBC is expected to improve India's position in the world banks ease of doing business ranking, attracting more foreign investors and also benefit the various stakeholders.

Index Terms:

Insolvency, Bankruptcy, NPA, Stakeholders.

Numerical Approach for a Sutterby Fluid Impinging to a Non-Fourier Flux and a Nonlinear Radiation with a Binary Chemical Reaction

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K. Subbarayudu, Department of Applied Mathematics, Yogi Vemana University, Kadapa

Abstract:--

Present effort is executed to read the thermal and mass transfer of Sutterby fluid by discussing sparkling characteristics of nonlinear thermal radiation and binary chemical reaction. Flow field equations for stretched surface are attained by incorporating a non-uniform heat source/sink, viscous dissipation and second order convective slip condition. The motive is to scrutinize the thermal transmission by means of a rephrased form of the Fourier law coined as Non-Fourier flux model. The formulation of physical problem convolutes a system of nonlinear partial differential expressions. To transfigure these consequent equations into non-dimensional form an appropriate scaling group of variables are used and solved numerically by RK4S method- bvp4c set of instructions in Matlab. Graphical depiction is offered for the flow manner of convoluted physical parameters of interest. In addition, the quantities which are likely to excavate the physical tendency in the environs of the stretching sheet are calculated.

Keywords:

Sutterby fluid, non-linear thermal radiation, binary chemical reaction, viscous dissipation, non-uniform heat source and sink

The Disruptive Effect of Cloud Computing Across Industries

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Abstract:--

Cloud computing continues to transform how companies operate. They now prefer outsourcing their requirements from those providing the services they need at much cheaper costs and in more effective and efficient manner. Cloud computing is the delivery of different services over the internet. Like data storage, servers, databases, networking, and software. This paper aims to present an overview of how cloud computing has disrupted industries and point to what the future holds.

Keyword:

Cloud computing, software, Amazon, Google, Microsoft, disruption

Hand Gesture Controlled Robot Using LabVIEW

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Dakoju Naga Venkata Sai Kiran, Student, CMRTC, JNTUH

Abstract:--

This research article is about controlling a robot wirelessly with the help of hand gestures through the latest real-time environment software tool i.e. Lab VIEW. A robot is simply a machine that can carry a complex series of actions automatically with or without human intervention. Range in wireless communication is not only higher but it also has a high life expectancy. A wireless robot can be controlled through a remote controller. But instead of carrying a remote, hand gesture can be used to control a robot. The movement of hands can move a wireless robot in any desired direction. To make all this happen one needs to know is programming. Without a programming hand gesture controlled robot cannot be built. But lab VIEW software uses a circuit diagram instead of programming to build and control a robot. It is a very simple software that uses graphical language instead of a programming language such as python, java etc. A person only has to draw a circuit in this software. It provides high accuracy and high efficiency. It makes the process of building a robot very easy and less time-consuming.

Keywords:

LabVIEW, Hand Gesture, MyRIO, semi-Autonomous Robot.

Performance of Recycled Aggregate as Constituents of Base and Subbase Layers for Rural Roads

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Abstract:--

This study is an attempt to evaluate the performance of recycled aggregate as constituents of base and subbase layers of rural roads in India. The physical and strength properties of the materials were tested and used to evaluate their performance. It was found that the physical properties of the recycled aggregates were inferior to those of crushed natural granite. The water absorption of 3.76% observed from recycled aggregates is higher than the recommended 2%. The recycled aggregate was blended with the natural aggregates at 25%, 50%, 75%, and 100% replacement levels. Professor The mixture with 100% crushed granite was used as control. The Maximum Dry Densities (MDD) of the aggregates reduced with increase in recycled aggregates content and as a result, the Optimum Moisture Contents (OMC) increased. The California Bearing Ratios (CBR) of the aggregates MDDs and CBR values of the aggregates reduced as the recycled aggregates increased. The 0%RA, 25%RA, 50%RA, 75%RA, and 100%RA had CBRs of 92%, 91%, 46%, 44%, and 28% respectively. Based on the CBR values and other tests conducted, utilisation of mixed recycled aggregates for subbase layers of rural roads is recommended. However, where mixed recycled aggregates are used for base layers it should be limited to 25% inclusion.

Index Terms—

California Bearing Ratio, compaction, base, recycled aggregates, subbase

Maragoni Convection Impact on Magneto-Nano Fluid in Porous Medium

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Abstract:--

A laminar magnetohydrodynamic (MHD) forced convection two phase nanofluid model in porous medium is considered along with Marangoni convection. It is assumed that the surface tension varies linearly with both the temperature and concentration and that the interface temperature and concentration are quadratic functions of the interface arc length x. Numerical solutions for the velocity, temperature and concentration distributions are obtained by using Shooting method. Influences of the Marangoni ratio, Schmidt number, Brownian motion parameter, magnetic number and thermophoretic parameter on the hydrothermal characteristics are presented through graphs and tables. Results depict that the temperature increases with increase of Permeability of porous medium, the Schmidt number, Brownian motion, magnetic number and the thermophoretic parameters but it reduces with the rise of the Marangoni ratio.

Keywords:--

MHD; Free convection; Marangoni convection; Brownian motion; Porous medium.

A Survey on Medical Brain Image Segmentation

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Abstract:--

Image segmentation is the difficult space of analysis. The medical image processing is a branch of image processing that allows the analysis, image and processing of medical pictures of various imaging modalities PET, MRI, CT, and microscopy. This might assist the physicians for diagnosis the abnormalities within the internal organs of the humans during a higher manner that results in a correct treatment. The main aim of medical image process is to reveal the unwanted growth, which is hidden at intervals the body. Medical Imaging may be a non-invasive image of internal organs and tissues of the body. The Segmented MR images give an effective method to analyze the cerebrum tumors, as it demonstrates the gritty structure of the mind and the size and area of the tumor. As the structure of cerebrum involves various folds, cerebrospinal liquids, dark and white issue, the recognizable proof and discovery of tumor turns into a pivotal errand. However segmented MRI is important to have exact diagnosis for the aforesaid. This paper focused on the strength and weakness of different methods of existing MRI image segmentation techniques.

Index Terms

Image processing, Segmentation, Clustering, Magnetic Resonance Image

Experiment Analysis of Soil Mixtures

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Abstract:--

Soils are often mixture composed of coarse and fine particles which are intricate inhomogeneous material and occur with widely varying characteristics in nature The main objective of this study is to investigate the effect of fine content on unconfined compression strength of clayey soils and shear resistance offered throught angle of internal frication, in case of sands. Tests were conducted with varying percentage of fines(10,20.40,60%) in soil samples. The individual constituents in soil composition have different mechanical and physical properties and interact differently under the influence of external and internal loads, and the relation between coarse and fine particles is difficult to differentiate. Again the fine content in coarse soil are carefully considered because they determine the composition and type of soil and affect certain soil properties such as permeability, particle friction and cohesion..In this study, laboratory tests were conducted to investigate the deformation of soil. A series of direct shear tests were carried out under same weight of sample and density with fine, reducing percentage of fine in sand with different gradation properties. A series of unconfined compressive strength tests were carried out under same weight, optimum moisture content and dry density in order to assess the effect of increasing percentage of fine in clayey soil. The angle of internal friction is found to decrease with increasing percentage of fine in sands and the unconfined compressive strength is found to increase with increasing percentage of fine particles in clayey soil.

Keywords:

Atterberg'slimits, Unconfined Compression test, Direct shear test specific gravity and sieve analysis.

Stabilisation of Black Cotton Soil with Human Hair Fiber

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Abstract:--

Soil reinforcement technique has been used in present times to improve the shear strength of weak soils.The main objective of this study is to investigate the suitability of solid waste materials such as human hair fibers in the process of soil stabilization as a reinforcement which can replace conventional commercial fiber materials. Human hair fiber is a natural non-biodegradable waste material which creates health and environmental problems. Physical properties of soil like Atterberg'slimits, compaction characteristics &strength characteristics of virgin soil samples were determined .The soil sample were treated with different percentages of Human Hair fiber (0.5%,0.7%,0.9%,1.2%and1.5%).The strength of the soil sample increased up to1.2% and then it decreased

Keywords:

Atterberg's limits, Human hair fiber(HHF), CBR,Unconfined Compression test,Specificgravity, sieve analysis.

A Study on Leadership Skills of Service Industry Executives in Chennai

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Abstract:--

Leaders and their leadership skills play an important role in the development of an organization. The success of an organization is usually attributed to its leaders. They play a key role in guiding themselves and the followers to work towards the organizational goals. Leadership skills take organizations to new heights. In any organization, leadership plays a great part in building unity and growth culture in a workplace environment. Leaders build talent and explore the hidden abilities of a team member. They exhibit the various skills like managerial skill, human/interpersonal skill, administrative/conceptual skill, personal vision/strategic planning skill, implementation/problem solving skill, emotional maturity skill, developing people skill, judgment/ wisdom skill and flexibility. These skills help the leaders to create a new pattern of thinking and guide them to take risks to handle any tough situation that an organization might face. There are many attributes that decide the kind of leaders that an organization would produce. It depends on the exposure level and the experience that a leader possesses during his/her stint in the organization.

Index Terms

Leadership, Skills, Service industry, Employee and Experience

A Survey on Anomaly Detection Methods to Secure Data in Cloud Computing Environment

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Dr.M.Sreenivasulu, Professor & HOD CSE, KSRM College of Engineering, Kadapa

Abstract:--
Cloud computing is completely internet dependent technology where client data are stored and maintained in the data centre of cloud service provider. Because of the distributed nature and open structure of the cloud computing its resources, data and applications are easy and attractive target for potential attacks by intruders. The integrity, security and availability of cloud clients need to be protected against various threats. The security is challenging issue in cloud computing. So Intrusion Detection and prevention systems (IDPS) are deployed in the cloud environment to detect malicious behaviour over the network and in the host machines. To provide security to data stored in cloud, various intrusion detection techniques can be used by cloud service providers. Anomaly detection is one of popular intrusion detection technique. The concept of anomaly detection system to detect and prevent the abnormal activities in the cloud computing environment was discussed in this paper.

Index Terms—
Anomaly Detection Systems, Cloud Computing, Cloud Security, IDS.

Design and Structural Analysis of Fighter Aircraft's Bomb Release Mechanism subjected to Aerodynamic and Inertial Loads using FEA

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Raja Singh Thangadurai .G, Scientist- 'G', Project Director, PJ-10(DAV), Defense Research and Development Laboratory, Hyderabad, India

Abstract:--

This work speaks about the advancement of design of a bomb rack unit's component, to carry out the ideal execution for the ejection of the bomb from a supporting body where the suspension, separation and ejection of the store are decidedly organized and controlled. Initially, aircraft bomb rack unit (BRU) was examined hypothetically. The structure of the bomb rack unit is designed considering the military standards. Nitty gritty investigation was performed for the critical case, capacity and reaction of the BRU among the stacking blends using Finite Element Method for Static and dynamic conditions and corresponding results were illustrated.

A Survey on Defense, Detect and Defeat against Selective Forwarding Attack in Ad-hoc Wireless Sensor Networks

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Dr. M.Sreenivasulu, Professor & HOD, Department of Computer Science and Engineering, KSRM College of Engineering , Kadapa

Abstract:--

Ad-hoc Wireless Sensor Networks usage spreading rapidly due to their flexibility to provide communication in unattended and hostile environment like military target tracking and weather prediction, without fixed infrastructure to provide communication. In Ad-hoc Wireless Sensor Networks nodes are communicate while moving. Since lack of physical security, it easily prone to security attacks. The network suffers from various attacks such as wormhole, black hole, and selective forwarding attack. Selective forwarding attack is a severe threat enables a compromised node behaves like normal node and may drops packets selectively. It deteriorates the performance of networks and integrity of information. Due to resource limitations of sensor nodes, it is not feasible to use conventional security solutions, which requires complex computations and more memory. Due to nodes mobility, it is a challenging task to detect selective forwarding attacks in Ad-hoc Wireless Sensor Networks. In this paper, we discuss some of the authentication strategies and detection techniques to defend and defeat against selective forwarding attacks.

Keywords -

Ad-hoc Wireless Sensor Network, Selective Forwarding Attacks, Authentication.

Implementation of Cascaded Switched Diode Multilevel Inverter for Photovoltaic Integration

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P.Sobha Rani, Lakireddy Balireddy college of Engineering

Abstract:--

In recent times, significant research has been carried out on Multi-Level Inverters (MLI), due to their importance in various applications such as renewable energy conversion system and drives. Conventional multilevel inverters use large number of switches, which require more installation space and cost .The major focus of current research is to obtain a high quality output with reduced number of switches. In this paper, a two stage cascaded switched diode multilevel inverter is proposed. A positive staircase output is obtained in the first stage. In the second stage both positive and negative output voltages are generated by applying phase opposition disposition technique adding full bridge inverter. The proposed method has benefits of less number of components and low total harmonic distortion. The proposed work is carried out using MATLAB/SIMULINK and the performance is analysed.

Keywords:-

Multi level inverter (MLI), Cascaded switched diode(CSD) multi level inverter, Phase opposition disposition (POD).Total harmonic distortion (THD)

Solar Based Soft Switching Isolated DC-DC Converter to Generate Five Regulated Dc Output Voltages

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J.Sivavara Prasad, Professor, Electrical and Electronics Engineering Department, Lakireddy Balireddy college of Engineering, Mylavaram, Krishna Dot, A.P, India

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Abstract:--

The aim of the paper is to extend a solar base soft switching inaccessible DC-DC converter for generating five multiple dc output voltages. The key problem of switched mode power converter operation is to produce EMI due to great do/dot and did/dot through the time of switch mode process. consequently, to realize high switching frequencies in converters, the switching losses and EMI emission are reduced if each controlled switch in the converter is turn-on or turn-off only when current passing through and or voltage across the switch is zero. The concept was to incorporate resonant tanks in the converters to create oscillatory voltage and/or current waveforms so that zero voltage switching (ZVS) or zero current switching (ZCS) conditions can be created for the power switches. The converter is composed of five outputs altogether. The first and third outputs are regulated through the duty cycle control of first two asymmetrical half bridge converters, while the second output is regulated through the phase shift of the first two asymmetrical half bridge converters A clogged loop and untie loop direct techniques of the five several dc outputs are explained for solar based system.

Keywords-

Solar System, DC-DC Isolated Converter, Zero voltage Switching (ZVS), Switching losses, Pulse width Modulation (PWM), Half Bridge Converter.

FPGA Based Control of Single Phase Three-Level Soft Switching Isolated DC-DC Converter

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Abstract:--

The single phase three level isolated DC-DC converter consists of four control switches operate under ZVS However, the single-phase three-level isolated DC-DC soft switching converter has been proposed in order to reduce voltage and current stresses. This converter topology requires less number of control switches and operates with an asymmetrical duty cycle control. The proposed three level DC-DC converters provide two- level voltage waveform before dc output filter, which significantly reduce the size of dc output filter. The proposed work has been implemented using MATLAB/SIMULINK and the performance of the proposed converter is verified experimentally by using FPGA controller.

Keywords:

Isolated DC-DC Converter, Switching losses. Zero voltage Switching (ZVS), FPGA Controller and Three-Level

Simulation and Modelling of Wind Energy Generator for Smart Grid

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R.Sarveswara prasad, Lakireddy Bali Reddy College of Engineering
R.Sobha Rani, Lakireddy Bali Reddy College of Engineering

Abstract:--

In this paper the authors present a steady state model of wind generator. The operating characteristics Tip-speed-ratio (TSR) and Cp (Power coefficient) of the wind turbine over varying wind speeds have been presented for the wind turbine specifications. Also the DFIG Induction generator model has been presented with the mathematical equations for stator and rotor voltages and currents respectively as a function of the electrical equivalent circuit parameters, slip and mechanical power out of the turbine (as an electrical power output of the turbine in MW). Further the variation in the stator and rotor active and reactive power output with the variation in the wind speed (m/s) have been presented.

As, the wind turbine normally stay away from the Grid terminals, so we need to consider the transformer and cable impedance for calculating the terminal voltage of the Grid (Point of Common Coupling), the variation in the terminal voltage with the variation of the wind speed have been studied. The proposed work is carried on MATLAB.

Further the developed model of the wind generator and its performance has been tested on a real-time wind speed time-series data available from MNRE (India).

Structural Response of Repaired RCC Beams in Flexure

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Abstract:--

This paper represents the experimental study on Reinforced concrete structural components are found to exhibit distress, even before their service period is due to over loading, corrosion and several causes. Such unserviceable structures require immediate attention, enquiry into the cause of distress and suitable remedial measures, so as to bring the structures back to their functional use again. This strengthening and enhancement of the performance of such deficient structural elements in a structure or a structure as a whole is referred to as retrofitting. The all important issue to be addressed in retrofitting is life safety.

Some retrofit requirements would address the issue of life safety, while acknowledging that some structural damage may occur. Ferro cement sheets are most commonly used as retrofitting material these days due to their easy availability, economy, durability, and their property of being cast to any shape without needing significant formwork. Ferro cement as a retrofitting material can be pretty useful because it can be applied quickly to the surface of the damaged element without the requirement of any special bonding material and also it requires less skilled labour, as compared to other retrofitting solutions presently existing. The Ferro cement construction has an edge over the conventional reinforced concrete material because of its lighter weight, ease of construction, low self weight, thinner section as compared to RCC & a high tensile strength which makes it a favorable material for prefabrication also. In the present thesis RC beams initially stressed to a prefixed percentage of the safe load are retrofitted using Ferro cement to increase the strength of beam in both shear and flexure, the chicken mesh is placed along the longitudinal axis of the beam. From the study it is seen that the safe load carrying capacity of rectangular RC elements retrofitted by Ferro cement laminates is significantly increased with mesh used for retrofitting.

In the present paper RC beams initially stressed to a prefixed percentage of the safe load are retrofitted using Ferro cement to increase the strength of beam in flexure, the chicken mesh is placed along the longitudinal axis of the beam. From the study it is seen that the safe load carrying capacity of rectangular RC elements retrofitted by Ferro cement laminates is significantly increased with chicken mesh used for retrofitting.

Effective and Energy Efficient Utilization of Intrusion Detection System in Ad Hoc Networks using Active/Inactive Mechanism

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Abstract:--

Mobile Ad Hoc networks are self-organizing networks in which nodes can transfer data between each other by direct connection or by using neighbors node, these nodes runs on battery and to keep them active in network battery life must be efficiently utilized. Mobile Ad Hoc networks can also be attack by malicious nodes to disturb network services; various types of attacks are available such as black hole (in this attack neighbor accepts data from source and drop all packets instead of sending to destination) grey hole (in this attack chosen some packets will be drop and rest sent to destination) worm hole (in this attack neighbor will use another malicious neighbor to transfer data and form a tunnel instead of sending to destination). To avoid such attacks Intrusion Detection Systems are developed and will be run in nodes all the time to monitor nodes behavior, If any nodes dropping packets then this IDS will detect and inform to other nodes about this nodes behavior. Running all the time IDS can consume much battery power and node lifetime can be reduce, to overcome from such issue we introduce concept called Efficient IDS Usage, in this technique a single node with high battery is responsible to monitor behavior of all neighbor nodes in its proximity and other nodes IDS will be in inactive state to save their battery for future use, if selected monitoring nodes energy drop to certain level then another node with high battery will be chosen as next monitoring node. In this paper at the time of network setup all nodes will discover their one hop neighbor and choose one node with high battery as monitoring node and make that node IDS active to monitor them, leftover nodes will be instruct to go to idle or inactive state to save their energy for future use. In a region whatever node sends packet then node with IDS will intercept that packet and perform filteration on that packet to detect abnormal behavior. If packet contains valid data then it will forward to destination otherwise packet will be drop at IDS node.

Keywords:

Intrusion, attack, sender, receiver, wireless, CCM, CoAP, ADHOP, IoT

Relationship Between Location-Wise Air Quality and Public Perceptions in Dhaka City

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Dr. Md. Tauhid Ur Rahman, Professor of Civil Engineering Department, Military Institute of Science and Technology, Dhaka, Bangladesh

Abstract:--
Air pollution due to particulate matter (PM) is perhaps the biggest environmental risk factor for human health. It is inevitable to incorporate public opinion in setting up air quality standards and policy formulations. There had been very few instances where public opinion is taken into considerations especially in the least developed and developing countries to estimate the level of exposure.
The present paper introduces an approach to determine the health impact of air pollution, assessing the relationship between the variation of location, exposure duration, and public opinion.
A cross-sectional study by convenient sampling technique was carried out at four sites of Dhaka city in Bangladesh. A total of 200 people (50 people from each location) of different age groups and gender were interviewed in the survey. Air quality data was obtained from fixed-site monitoring stations and low-cost air quality monitoring sensors after necessary validation with equivalent standard equipment. An extensive statistical analysis was carried out using MS Excel and IBM SPSS software. To check the relationship between location-wise air quality and seven probable health risks related to PM concentration, a chi-square test was performed.
Results show that 80.5 percent of the respondents opined that they are very much affected by air pollution. It is found that 94.5 percent of the total respondents considered emissions from motor vehicles as the most common cause of pollution. A strong association was found between skin disease and location-wise level of exposure (Cramer's V=.43). However, four risks were moderately dependant and two were weakly dependant on location. Cross-examining the air quality data and public perception it was evident that health risk is highest at the location of maximum pollution.
This paper highlights only seven indicators of health risks. A further epidemiological and clinical study is needed to conform to the results of this study.

Keywords:
air quality, field survey, health risk, particulate matter (PM), public perception

Dynamic Performance Enhancement of DFIG Based Wind Power System with PI Controller

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Dr. J Bhavani, Associate Professor, Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering &Technology

Abstract:--

Simulation of wind energy conversion systems of doubly fed induction generator to improve the efficiency of the steady state error is identified in this paper. On focusing the steady state condition the active power output of the wind energy conversion system is observed. To reduce the error a proportional integral controller is attached to the system output. The PI constants are taken through trial and error method to limit the steady state error of the active power output. Adding up to it, The behavior of DFIG (i.e; torque, rotor speed, and the other characteristics)are observed under the grid voltage . Simulation of model is carried out in MATLAB Software. Necessary outputs are noted.

Keywords-

Doubly Fed Induction generator (DFIG),Wind Energy Conversion System (WECS), Grid, Active power, Proportional Integral Converter.

Performance of Light Weight Concrete made with Pumice Stone as Coarse Aggregate with or without Admixture into the Composition

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P.Rajendra Kumar, Assistant Professor, Dept of Civil Engg, KSRM College of Engg-Kadapa

Abstract:--

Light weight concrete is introduced rapidly into the construction industry due to wide spread advantage of precast and prestressing elements. It is made up of naturally available light weight aggregates, Pumice is notable one of the most common and the oldest of naturally occurring aggregates utilized lightweight coarse aggregates used for the production of concrete for construction industry. At present investigation, pumice is used as a coarse aggregate at 0, 50 and 100% replacing natural coarse aggregate and study the performance of the light weight concrete with or without admixture in fresh condition and hardened state. Slump and compaction factor values are declining with respect to conventional concrete and strength values are increased with respect to conventional when the composition added with aluminum admixture.

Keywords:--

Pumice stone, light weight concrete (LWC), light weight aggregate (LWA) and Performance.

Image Fusion Technique for Reduced Blurriness by Using Fuzzy and Neuro Fuzzy Logic

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Dr. M. Venkata Narayana, Professor, Department of ECE, KSRM College of Engineering, Kadapa, Andhra Pradesh, India

Abstract:--

Image Fusion has become a topic of great interest to a variety of engineers working in different disciplines. It is being used for medical applications so as to get a better image. Image fusion has the advantages of improving the reliability by removing redundant information and improving the capability by keeping complementary information. Image fusion has attracted a widespread attention owing to applications in medical imaging, automotive and remote sensing. Image fusion deals with integrating data obtained from different sources of information for intelligent systems. Image Fusion provides output as a single image from a set of input images obtained from different sources or techniques. Different approaches in image fusion provide different type of results for different applications. Fuzzy and Neuro-Fuzzy algorithms have already been proposed for image fusion process. The work here further explores the image fusion technique using Fuzzy and Neuro Fuzzy approach for the better quality of images. We found this technique very useful in medical imaging and other areas, where quality of image is important than the real time application. The work is supplemented by algorithms, its simulation and qualitative analysis using Entropy.

Key Words:

Image Fusion, Fuzzy Logic System, Neuro Fuzzy Logic Network, Entropy, Redundant Information, complementary Information.

Combined Effects of Thermo-Diffusion and Chemical Reaction on Convective Flow past an Infinite Vertical Plate In The Presence of Ohmic Heating

N. Ananda Reddy, Department of Mathematics, A.I.T.S., Rajampet, Kadapa, A.P

Abstract:--

Thermo diffusion and chemical effects on heat transfer in mixed convection flow and mass transfer past an infinite vertical plate with Ohmic heating and viscous dissipation have been discussed. Approximate solutions have been derived for velocity, temperature, concentration profiles, skin friction, rate of heat transfer and rate of mass transfer using perturbation technique. The obtained results are discussed with the help of graphs to observe the effect of various parameters like Schmidt number (Sc), Prandtl number (Pr), Soret number (So) and chemical parameter (K), taking two cases viz. Case I: when Gr > 0 (flow on cooled plate) and Case II: Gr < 0 (flow on heated plate). Thermal diffusion causes both the fluid velocity and temperature to fall due to the presence of the chemical effect. Velocity and temperature profiles are higher for mercury than electrolytic solution. Soret effect increased the concentration of the fluid while chemical effect decreased.

Key words:

chemical effect, thermo diffusion and heat-mass transfer.

Numerical solution for stagnation point flow of a Maxwell fluid over a stretched surface with thermal and concentration buoyancy effects

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V. Venkata Ramana, Department of Applied Mathematics, Y.V. University, Kadapa, A.P.
G. Ravi Sankar, Department of Applied Mathematics, Y.V. University, Kadapa, A.P.

Abstract:--

The purpose of this presentation is to study the numerical simulation of the stagnation point flow of a Maxwell fluid past a stretching surface exposed to thermal and solutal buoyancy effects. Numerical solutions have been determined through the Runge-Kutta-Gill method (RK Gill). Correspondence resolutions are intended and obtainable graphically used for non-dimensional velocity, temperature, and concentration, local rate of heat and mass transfer by relatable parameters. Confirmation of consequences is achieved by comparison during prior consequences meant for clear fluid studies. It is found that heat and mass transfer rates are reduced in the assisting flow region and the opposite results were observed due to increment in fluid Deborah number. This many problems have quite a few appliances during engineering and petroleum industries for instance electroplating, chemical processing of heavy metals and solar water heaters.

Keywords :

Maxwell fluid, heat and mass transfer, buoyancy force, RK-Gill method.

Correlation of Light Wavelength in Nano Scale, Light Intensity and Nano Current in Advanced Materials

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Abstract:--

Light wavelength in nano size of 250 nm, 300 nm, 350 nm, 400 nm and 480 nm are associated with light power at 10%, 20%, 30%, 40%, half, 60%, 70%, 80%, 90% and 100%. Nano current is tuned from 68.33 nm to 6.83 nm at different light powers in cutting edge materials of Thorium, calcium, magnesium, silver and Rubidium. Greatest Nano current is seen as 68.33 nm at 100% and least nano current of 6.83 nm is seen at 0%. Progressed nanomaterials are being used in different headways and united into a wide display of buyer things that endeavor their appealing optical, conductive, and antibacterial properties. Progressed nanomaterials are used in biosensors and different inspects where the silver nanomaterials can be used as natural names for quantitative ID. Antibacterial Application of cutting edge nanomaterials is intertwined in clothing, footwear, paints, wound dressings, mechanical assemblies, cosmetics, and plastics for their antibacterial properties. Conductive Applications of Silver nanomaterials are used in conductive inks and facilitated into composites to overhaul warm and electrical conductivity. Optical Applications of nanomaterials are used to adequately procure light and for improved optical spectroscopy including metal-overhauled fluorescence and surface-improved Raman scattering.

Keywords :

Light wavelength, nano size, light power, nano current, Optical applications, antimicrobial applications and conductive applications.

Investigation of Deep Groove Ball- Bearing Vibration Behavior & How Does It Affect the Bearing Life

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Dr.V.S.S.Murthy, Professor, Department of Mechanical Engineering, K.S.R.M. College of Engineering (Autonomous), Kadapa, A.P.

Rekam Manikumar, M.Tech. Student, Department of Mechanical Engineering, K.S.R.M. College of Engineering (Autonomous), Kadapa, A.P.

Abstract:--

Investigation of Mechanical systems like Lathes, Motors, Pumps, Turbines, and Engines are the rotating machines are relying. Misalignment, unbalance, rotor cracks and rotor rubs, all the measurements are done at the bearing locations. Earlier bearings themselves having so many rotating elements, they themselves could be defective. This is the main cause for only bearing system consideration by neglecting the other parameters. Anti-friction bearings are the elements that will allow or transmits the motion with smoothness. Finding the defects in the bearing is very difficult some times. Present work includes how the rise of vibration will affect the bearing life and also how could fault will be initiated with corresponding to load at the constant speed. SKF 6024 Bearing is considered for this work and Experimentation has been done by varying the load radially from zero to maximum @ constant speed. The outer race is fixed in this work and carried the dynamic loading with the help of a hydraulic press. The data has been captured by CSI Emerson device and found the fault root cause with the help of Fast Fourier transformation in frequency domain analysis.

Index Terms—

Spectrum Analysis, Vibration Level, VFD Pump, Bearing life, frequency domain analysis.

Unsteady MHD free Convective Heat and Mass transfer flow Past an Infinite Vertical Porous Plate

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B. Rama Bhupal Reddy, Professor of Mathematics, Department of H&S, K.S.R.M. College of Engineering (Autonomous), Kadapa, .A.P.

Abstract:--

Hall current and Chemical reaction in the existence of heat-source / absorption have been examined on unstable MHD open convective heat and mass transfer flow via an infinite vertical porous plate. The governing equations are transferred to a system of differential non-dimensional equations and then analytically solved by perturbation techniques. The dimensionless velocity, temperature and concentration profiles show the impacts on fluid properties for different flow limits in the flow domain. Tables measure the impact of different flow limits on the friction in skin the quantity of Nusselt and the quantity of Sherwood.

Key words:

Heat Transfer, Mass Transfer, Porous Medium, Hall Impacts, Chemical Reaction.

Numerical Approach for Boundary Layer Flow of Sutter by Fluid with Heat Generation or Absorption and Chemical Reaction

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G. Ravi Sankar, Department of Applied Mathematics, Y.V. University, Kadapa, A.P.
V.Venkata Ramana, Department of Applied Mathematics, Y.V. University, Kadapa, A.P.

Abstract:--

The article presented here, seeks to research the boundary layer flow of heat and mass transfer in a non - Newtonian fluid combined with the Cattaneo - Christov heat flux model with heat generation or absorption and chemical reaction. The combined method is abridged taping appropriate related keys and resolved mathematically by combining the shooting method with the Runge-Kutta of the fourth method. The purpose is to investigate heat transfer using a revised from of the Fourier legislation of warmth conduction known as Cattaneo - Christov temperature flux model. The factors that impact major guidelines are considered. The calculated effects of speed, heat and focus information are shown through graphs. Significant results are the following: The shear stress of the wall structure shows reverses designs for shear thinning and shear thickening liquids. The temperature and the thermal boundary coating stiffness raises with upsurge in high temperature era or absorption.

Keywords:

Sutter by fluid, heat and mass transfer, heat generation or absorption, chemical reaction.

Detection of Network Intrusion by using Supervised Machine Learning Technique with Feature Selection

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J Avinash, Assistant Professor in Department of CSE, N.B.K.R Institute of Science & Technology

Abstract:--

To find out network traffic and classify whether it is malicious or benign A novel supervised machine learning system is used .To obtain best model considering detection success rate, both combination of supervised learning algorithm and feature selection method have been used. To classifying network traffic it is found that Artificial Neural Network (ANN) with wrapper feature selection support vector machine (SVM) technique is used. To evaluate the performance, NSL-KDD dataset is used to classify network traffic using SVM and ANN supervised machine learning techniques. With respect to intrusion detection success rate Comparative study shows that the proposed model is efficient than other existing models.

Keywords:

intrusion, machine learning, deep learning, neural network, support vector machine, feature selection.

Correlation of Diffraction with Bragg Wavelength and Refractive Index Ofadvanced Material in Nano Scale

Dr A Srivani, VVIT, Doctor of Science (Quantum University)
Dr K Krishna Kumari, Associate Professor in NRIIT

Abstract:--

Bragg wavelength is measured between very low wavelength range 0.1 nm to high wavelength range of 10,000 nm (UV-VIS-IR) and correlated with refractive index and period of bragg grating in Nano scale. Wavelength (UV-VIS-IR) in nano scale is also correlated with grating spacing in micro scale, angle of incidence and distance from grating to screen in macro scale. Refractive index and period of grating increases with Bragg wave length in UV-VIS-IR Spectrum range. Linearity relation is observed in all optical properties.

Keywords:

Bragg wavelength; Refractive index; advanced materials; Nano scale range; period of bragg grating; grating spacing; angle of incidence and Distance from grating to screen in macro scale.

Investigation Effects of Nano Metal Oxide Blended Prosopis Juliflora Biodiesel on Di Engine

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T.Ganapathy, Principal, Achariya College of Engineering Technology, Pondicherry, India.

Abstract:--

The studies have been focused on discovering the fuel that would be adaptable to the existing engine constructions and that would meet the criteria regarding renewability, ecology and reliability of use. The main objective of this work is to discuss the impact of biodiesel from Prosopis Juliflora oil on performance and emission characteristics with bio-diesel. In this study, the effect of bio-diesel from prosopis Juliflora oil and its blends on a single cylinder Kirloskar TV-1 diesel engine was investigated. In this work, the performance and emission analysis were conducted. The tests were performed at steady state conditions with Prosopis Juliflora bio-diesel with different proportion range from 25 to 100% in steps of 25 (Sample 1, Sample 2, Sample 3and sample 4). The experimental results reveal a marginal decrease in brake thermal efficiency when compared to that of sole fuel. In this investigation, the emission test were with the help of AVL Di gas analyser, in which CO, HC and smoke density are marginal increased on the other hand CO2, O2 and NOx are appreciably reduced when compared to that of sole fuel. From the above result we can improved the Brake thermal efficiency and reduction of emission we are attending the metal oxides for the previous results.

keywords:

Prosopis Julifloraoil, Transesterification, Biodiesel; Oxides of nitrogen, Smoke, Nano Particles& Aluminium Oxide.

Supply Chain Optimisation for Operational Efficiency in Indian Pharmaceutical Industry – A Review

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Dr.A Prabhu Kumar, Director, School of Management Studies, JNTU Hyderabad

Abstract:--

Supply Chain Management has become a prominent discipline in all the businesses of the world. Organisations are looking for an edge over the competitors by achieving operational efficiency through optimization techniques. Cost effectiveness and maximisation of productivity are the major focus areas for any organisation to achieve the operational efficiency. Pharmaceutical supply chains are exceptionally complex as there are no second sales for the drugs and medicines. Huge amounts are spent for research and development in supply chain processes of Pharmaceutical industries. The extensive review on pharmaceutical supply chains identified research gaps in various areas such as inventory management, new product and process development, plant design, network design, capacity planning, pipeline and development management, logistics activities in outsourcing, reverse logistics, lean manufacturing, green supply chain management and implementation of e-business processes etc for operational excellence. Not much research is available in the areas of pharmaceutical supply chains. Thus, it is found necessary to evaluate and describe an optimization-based approach on inventory management for the operational excellence in the Indian pharmaceutical industries. The current study reviews the literature available on supply chain optimization from 2012 to till date. Major studies conclude that supply chain process is complex especially in pharmaceutical companies as there are many challenges in the form of material flow, distribution, logistics and transportation etc.

Index Terms

Operational Efficiency, Productivity, Effectiveness, Supply Chain Management, Optimisation Techniques, Cost Minimisation, logistic models, linear programming

Studies on Coconut Oil Based Low Temperature Hair Oil Formulations

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Abstract:--

The coconut oil based hair oil solidifies in winter. To get Solidification Point (S.P.)below 50C & good oxidative stability, the interesterification with monounsaturated fatty acid group oils was planned. Thus coconut oil on interesterification with castor oil gave product of S.P. below 50C at optimum ratio (Table 2) using immobilized enzyme from Thermo-Myces Lanuginosus (TLIM),. But the lower ratio of coconut oil in this formulation led us to evolve alternative method. The melting points of methyl esters of coconut oil & of the products of interesterified coconut oils and liquid oils suggested us to go for trans-esterification and interesterification. Trans-esterification of coconut oil with methanol using chemical catalyst was experimented as per reaction conditions of Table 3 gave Methyl esters of 2°C S.P. though viscosity was low. So, it was interesterified with coconut oil (Table 3), detailed study is underway) to improve viscosity. The interesterified Castor Oil & coconut oil was re-interesterified with MECCNO & (IE, CCNO+MECCNO) (table 4), process optimized to get product with 75% coconut oil.

Keywords:

CCNO- coconut oil, IE- interesterified, MECCNO– methyl esters of coconut oil, S.P.- Solidification point

Enterprise Crowdsourcing Models for Software Development

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Dr. M.V. Ram Prasad, Professor, GITAM (Deemed to be) University, Bengaluru Campus
Narayanan Ganesh, Enterprise Architect, at an Information Technology Organization, Bengaluru

Abstract:--

Crowdsourcing refers to a mechanism of tapping into the collective power of people to perform tasks, solve problems and contribute to fresh ideas. Industry study gave us an insight that broader adaptation of Enterprise Crowdsourcing has been very minimal. Hence, a product-based Information Technology (IT) organization sponsored a research & forward-engineering activity to identify how an Enterprise could leverage the power of the crowd to develop software projects/programs that meet Enterprise norms. This paper talks about key challenges faced by organizations and how crowdsourcing as a solution can benefit the companies. Also talks about the key learnings from the organization's one-and-half year long research activity on how enterprises can adopt crowdsourcing as a mechanism to create or enhance Enterprise applications at a fraction of the cost, twice the agility and with minimal Total cost of ownership (TCO)..

Keywords:

Crowdsourcing, Crowd Software Development, Software by masses, Rewarding crowd

Implementation of NN & CNN in Brain Tumor Detection & Classification

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Dr. M. Venkatanarayana, Dean & Professor of KSRMCE.

Abstract:--

At present days, detection of brain tumor is become a very elusive task. It is very difficult to identify the brain tumor in "Magnetic Resonance Images" because of their shapes, locations, and image possibilities. Due to this problem death rate will be increased year by year. If we detect the tumor at earlier stage then we can reduce the fatality rate by giving opportune treatment. There are disparate brain tumor detection algorithms like FCM, SVM, & DNN based algorithms enumerate only texture & shape with low accuracy. So to avert these problems & also to improve accuracy an unique model is used. In this study, the implementation of NN & CNN in Brain Tumor Detection and Classification technique was utilized and implemented by using python software 3.7.3., it is noticed that the test accuracy is improved and it defines the 2 classes of tumors those are BENIGN and MALIGNANT.

Keywords:

convolutional neural network (CNN), python software, accuracy, benign and malignant.

Thermal and Economic Optimization of Shell and Tube Type Heat Exchanger Using Genetic Algorithm

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Manish Pokharna, Associate Professor, Mechanical Engg Department, Pacific University Udaipur, India.

Abstract:--
In the present work the design of shell and tube type heat exchanger is optimized in terms of cost and heat transfer rate for triangular and square orientation of heat exchanger tubes using genetic algorithm. The results of genetic algorithms are compared with other optimization algorithms. As per the findings the genetic algorithm performs best optimization on both cost and heat transfer rate as compared to the other optimization techniques observed in the literature. Moreover, the triangular configuration of the tubes gives utmost heat transfer rate at lowest cost than the square configuration.

Key words:
Shell and Tube; Heat Exchanger; Optimization; Genetic Algorithm.

Factors Affecting Operational Efficiency of Selected Banks in India

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Dr. Rajesh Mamilla, AITS,Rajampeta
Dr. T. Narayana Reddy, AITS,Rajampeta

Abstract:--

Over the past several years, substantial research efforts have gone into measuring the efficiency of commercial banks. After nationalization of banks, there was a growing concern on the deteriorating of banking sector's efficiency in several spheres. An academic study on the performance of the nationalized banking sector in India is very important and pertinent in the context of its structural existence. Before taking up such an exercise, an attempt is made in this section to present a review of the available studies in the relevant area of banking. The research studies conducted in the field of banking in India and abroad relate mostly to institutional, functional and developmental activities of banks.

Key words:

Efficiency, Nationalization, Structural, exercise, substantial, commercial, pertinent.

Contribution of Thermal Mismatch and Orowan Strengthening Effect in SiCp Reinforced Aluminium Metal Matrix Nanocomposites

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C. Nagaraja, Department of Mechanical Engineering, K.S. R. M. College of Engineering, Kadapa
J. Suresh Babu, Department of Mechanical Engineering, K.S. R. M. College of Engineering, Kadapa

Abstract:--

Demand is increasing for high efficient grade materials to minimize the weight of the assembly parts, carbon emissions and other pollutants. Aluminium based metal matrix nanocomposites (Al-MMNCs) are the advanced materials which satisfies the various engineering applications. The aluminium based materials are used in various sectors such as defense, automobile, space craft and structural applications. The SiCp nano-reinforcements are added to enhance the strength properties of the aluminium based materials. The results proven that the incorporation of SiCp nano-reinforcement particles in the aluminium based matrix yields better mechanical properties. The enhancement in yield strength of the Al-MMNCs is predicted using dislocation mismatch effect and Orowan factors. The contributions of thermal mismatch and Orowan strengthening effect in SiCp reinforced Al-MMNCs are evaluated. The thermal mismatch and Orowan factor contributed major role in Al-MMNCs.

Keywords:

Metal matrix nanocomposites, dislocation effect, Orowan effect, Yield strength

Experimental Investigation of the Waste Plastic as an Constructive Materials in SMA

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Dr.G.Sreenivasa Reddy, Professor & Head, Dept. of Civil Engineering, KSRM College of Engineering, Kadapa

Abstract:--

The present examination researches the advantages of balancing out the stone masticAsphalt (SMA) blend in adaptable asphalt with destroyed waste plastic(LDPE). Customary (without plastic) and the balanced out SMA blends were exposed to execution of compressive quality tests with shifting rate bitumen by weight of mineral total (5% to 6.5%)) and by differing rate plastic by weight of mix(5%,10% and 15%). Plastic substance of 10% by weight of bitumen is prescribed for the improvement of the exhibition of Stone Mastic Asphalt blends. 10% plastic content invigorates an expansion in the compressive contrasted with the traditional SMA Mix.

Index Terms—

SMA, Compressive Strength, Waste Plastic (Low Density Poly Ethylene Grocery Bag(LDPE)), Pavements.

Influence of Inclined Magnetic Field on Mixed Convection Flow of a Viscoelastic Fluid through a Porous Medium in a Vertical Channel with Permeable Walls

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Abstract:--

The aim of this paper is to present the fully developed the influence of inclined magnetic field on mixedconvection flow of a viscoelastic fluid through a porous medium in a vertical channel with permeable walls. The effects of various emerging parameters on the velocity, temperature, skin friction and Nusselt number are studied in detail with the aid of graphs.

Keywords:

Visco-elastic, Porous media, Reynolds number, viscous dissipation, Mixed convective flow,Viscous dissipation.

Congruence Relation on d-algebras

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Abstract:--
The notion of d-algebras introduced J.Neggers and H.S.Kim [7] which is generalization of BCK-algebras. They investigated several relations between d-algebras and BCK-algebras. Ideal theory in d-algebras introduced J.Neggers, Y.B.Jun and H.S.Kim [8] and investigated some relations. In this paper i introduced Congruence relation on d-algebras, proved ~ is equivalence relation and ~(0) is d^*- ideal.

Keywords:
BCK-algebra ,d-sub algebra ,d^*-ideal , equivalence relation.

Enhanced Swarm Based Mac Layer Protocol for Lazy Receiving Process in Manets

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Virendra kumar Sharma, Bhagwant University
Ranganath H.R, Visveswaraya Technological University

Abstract:--

Lazy Receiver Processing is new network subsystem architecture, which provides stable overload behavior, fair resource allocation, and increased throughput under heavy load from the network. Enhancements in the MAC layer protocol need increases the efficiency of scheduled process. Another major concern in LRP is security. The LRP network is always highly vulnerable to attackers due to wireless communication mediums. If any such attack occur in the network degrades the network performance and increases the overhead in the network. In this paper, our focus is to improve the network life time by enhancing scheduling process in MAC layer & enhancing detecting and diffusing attacks capabilities by improvements in AODV. Enhanced ant colony based AODV protocol for the analysis of gray and black hole attack effects. A comparative analysis is shown among EAACO (Energy aware ant colony optimization) and EAODV (Enhanced AODV) protocols. We compared the performance of these protocols based on various QoS parameters delay, control overhead, throughput and packet delivery ratio & alive nodes. The simulation results show that our protocol performance is better than others.

Index Terms

LRP, Black Hole, Gray Hole Attack ,malicious node.

Tri-band Rectangular Patch Antenna for UWB Applications

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Abstract:--

The rectangular patch antenna is designed with a compactable size of 21×19×1.6 mm^3 for UWB applications. To achieve tri-band operating frequency the original rectangular radiation patch is modified by cutting a ring slot at the centre of the original patch and additional slots are made both from inside and from outside of the original rectangular patch diametrically . The proposed antenna observed with good directivity characteristics The analysed results are observed with three different frequencies 4.14GHz,6.5GHz and 11.45GHz with bandwidth of 4.14GHz -11.45GHz and return loss is <2 for all resonating frequencies with good radiation because of above characteristics and simplicity of the design

Development and Testing of Jute Fiber Epoxy Composites

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Abstract:--

Nowadays, scientist and engineers working in the field of materials are too concerned with sustainability issues and environmental protection. Due to which, bio degradability and sustainability, natural fiber composites are preferred as over the conventional materials. So, it is the need of the hour to work on the biodegradable materials and natural composites. This paper presents the preparation of Epoxy resin and Jute fiber-epoxy composite using hand lay- up technique. In this regard, an open type mould made of plywood was used. Both single ply and double ply composites were prepared and compared under different mechanical loads. It was observed that the jute epoxy composite exhibited better strength under different mechanical conditions.

Index Terms:-

Epoxy resin, Hand layup technique, Jute fiber, and Mechanical testing.

Diabete Mithrr- A Non-Invasive Method for Diabetes Diagnosis

Bharathraj Sivakumar, Bannari Amman Institute of Technology

Abstract:--

The advancing technology gives us various chances for diagnosis and treatment of the ailments. As an electronics engineer, it is our prime duty to device a technique or an instrument to diagnose these ailments without any adverse effects. The diseases can be categorised as of acute and chronic. Many valuable lives are lost as the onset of the disease cannot be identified at an earlier stage. Once identified, periodical monitoring is essential for many diseases. Here we came with a solution for the diagnosis of Diabetes Mellitus. The onset of this disease can be identified by various symptoms such as frequent urination, sleeplessness, change in the focal power of the eye etc. The factor we considered is the distortion of the retina. The retina is scanned for a large number of people. The images are collected as a database. Then the retina of the diabetic patients is captured. This database is used as primary database. Through the mobile application, we capture the retina of the user using the front camera of the mobile. This image is then processed and the data are obtained. The captured image is then analysed by IMAGE ANALYSIS. This gives the prediction whether the person is affected with diabetes or not. Once the test is positive, the app prescribes the precautionary measures to prohibit the further decrement of the health. The main objective is that the method is completely non- invasive i.e. no invasions or fissures are made for the blood test. This is completely free of cost to the end user. There is no prerequisite to get the best from it.

Index Terms:-

Retinal distortion, Diabetes Mellitus, Image analysis.

Application of Dempster-Shaffer Theory to Study the Student Performance in Post Graduate Examinations

Ananth.Y.N, Senior Research Fellow and Ph.D student, Jain University, Bangalore

Dr.Narahari.N.S, Professor, Department of Industrial Engineering and Management, R.V.College of Engineering Autonomous institution affiliated to VTU Belagavi

Abstract:--

Dempster- Shafer theory is a radically different kind of theory when it comes to probabilistic systems. It proposes a system where in the outcome of an experiment can be studied or determined depending on the extent of belief in the system. Instead of assigning probabilities to outcomes, their occurrence is measured with the extent of belief one has got regarding it. The belief extents from different sources can be combined together to assign a probabilistic occurrence, indicated by the belief in that outcome .

In the current study, the post graduate entrance examination scenario is studied. Here, the students entering into the post graduate courses are expected to possess certain high end skills like analytical skills, mathematical skills and so on. The students who take the test may not possess these skills to the required extent. In the current study a correlation has been found between the qualifying degree marks and entrance test marks and also the pattern in which the students answer the question paper. Dempster Shafer theory can be used as a framework to understand the patterns that exist in the answering of the students.This is done in two phases consisting of two different data sets of the student marks of different examinations. This work is further used as an input to build a decision support system, where in, based upon the classification and their results, the questions in the question paper get revised.

Index Terms:-

Dempster Shafer theory, performance ,Post-graduate courses,Student aptitude.

Fuzzy Logic Controlled Bidirectional Converter for Domestic Utilization

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Abstract:--
This paper analyses a solar PV based system integrated with a bidirectional converter to feed to an induction motor load to power domestic applications. The basic idea is to make use of renewable energy source to accomplish a reasonably moderate steady output which is again boosted using a bidirectional converter. A bidirectional converter has the capacity to boost voltage in forward mode and to buck voltage in the reverse mode. Since solar energy is quite well easily available, we make use of the sun's irradiation and the temperature to tap maximum energy. Closed loop Voltage control is accomplished using PI as well as FLC, as it is proved that THD reduces with FLC implementation with minimal components in the circuit.

An Optimal Auto Encoded Deep Neural Network Based Intrusion Detection Systems for Mobile Adhoc Networks

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Abstract:--

Using the application of ad-hoc networks, communication models in this field of wireless networks have been developed. Greater research is performed for mobile nodes in mobile ad hoc networks (MANET). Intrusion Detection Systems (IDS) is considered as a main component of secured system. A major issue in security system is, it is assumed to be inefficient intrusion detection system due to the access of enormous network information. Traditional IDS provides lower detection rate as well as greater negative alarms with maximum processing time. This study provides an effective IDS method for MANET by combining feature selection (FS) based classifier approach model for efficient identification of intruders. For FS, particle swarm optimization (PSO) algorithm is utilized to select the essential features from available features. The minimized feature has the subset as and is fed to Auto encoded Deep Neural Network (AEDNN) for discovering the availability of hackers. By including PSO before classification process, it would improve the effectiveness of AEDNN. For practical experience, KDD'99 database is deployed in order to validate the projected technique. The end results signify that greater outcome of PSO-AEDNN model is attained across previous IDS in various estimating variables.

Keywords:

MANET; PSO; AEDNN; Classification

Air Pollution Monitoring System Using MQ Sensors

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Abstract:--

Today in modern world pollution increases enormously as it leads to diseases like heart and lungs failure, skin cancer, diabetics etc and its leads to death in small ages. Air pollution is the major pollution which was caused by pollutant like carbon monoxide, sulphur dioxide, nitrogen oxides, ozone, particulate matter. Mainly cities are affected by air pollution than the rural areas. Implementing to detect air pollution using cost efficient sensor are easy. Sensor has become one of the emerging technology which sense data from the environment. Arduino Microcontroller to program and analyse the data. Sensor are placed in different environment where different harmful emission like vehicular emission (SO2), sewage gas (CH4, H2S), industry emission (CO2, CH4) are present hence in particular area which emission is harmful can be identified. Hence air pollution is continuously monitored and require measures can be taken for the environment to be in safety level for living beings. Main advantage of this is that it is cost efficient, less consumption of power, eco-friendly, stability and accuracy.

Keywords:

Arduino, Air pollution, industry emission, vehicular.

Antibacterial, DNA Cleavage, Superoxide Dismutase Mimetic and α–Amylase Inhibitory Activity Studies of Some Metal Based Bioactive Materials

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Abstract:--

A series of transition metal based bioactive materials have been synthesized under microwave condition in the absence of solvent using an azo-azomethine derivative *viz*, 1-[(2-aminopyrimidinyl)methylene]-3-[(phthalichydrazid-3-yl)azo]naphth-2-ol(H_2PAP). The biological properties such as antibacterial, DNA cleavage, Superoxide dismutase mimetic and α–amylase inhibitory activities have been examined for the metal based compound as well as the free ligand. In all the cases, the metallation increases the biological activity.

Flow Modelling of Strom Water Drain along Kannammoola Akkulam Stretch

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Abstract:--
Kerala has been a victim of unprecedented flood for the last two years owing to heavy rainfall, spread over a short span of time. The study of flow patterns in existing streams are of utmost importance, especially in urban areas where population density is high. Hence, in this study flow analysis of a stream stretch of length 5.65 km is studied and critical locations of the stream stretch are identified. From the output generated after modelling the channel stretch, the variation in conveyance of water along the channel, distribution of water depth and its relation with the channel depth along the stretch & nature of the flow regime are analyzed. The stream was modelled and analyzed with 1 Dimensional steady flow in the software - HEC RAS.

Keywords:
HEC RAS, Stretch, Regime, Conveyance ratio.

Ambiguity Sets Determination for Fault Diagnosis of Analog and Mixed Signal Circuits

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Abstract:--

A Simple Binary Classifier for finding ambiguity sets or elements and potetially faulty components in analog and mixed signal circuit under test (CUT) is proposed in this paper. Node Voltages are used as features for classification. The classification criteria is based on the Euclidean distance, threshold and score metrics of the features. Threshold value for classification is estimated based on the performance metric, F1 Score of the binary classifier. Two bench mark CUTs, second order LPF and an 8-bit Digital to Analog Converter are used to evaluate the performance of the binary classifier used.

Keywords:

Fault diagnosis, analog circuits, mixed signal circuits, binary classifier, ambiguity sets.

A Study on Customers' Preference for Electronic Food Ordering System in Coimbatore

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Abstract:--

In today's scenario, internet is being used in every field of business. The hotel industry is an emerging trend in business world today. Most people tend to have their food in restaurants nowadays for various reasons which may include relaxation, time constraints, etc. Introduction of e-commerce in the hotel industry has facilitated the electronic food ordering system in which the customers can select their preferred restaurants and place their own order electronically over online portals. There are many food online portals that provides a healthy link between the customers and hotel. In this paper, we are mainly discussing about the customers' preference for digital ordering system among Coimbatore city, their food ordering patterns, difficulties faced by them and suggestions to overcome such problem.

Extending Description Logics for Semantic Web Ontology Implementation Domains

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Abstract:--
Semantic web has emerged as the field of integrating various logic families and their extensions. The Description Logic extensions provided considerable attention and research for better expressivity and decidability. The exactness of validity and soundness is provided by extending the rules and axioms as facts and the completeness as every valid statement is associated with a proof.
This article concentrates on adding threshold concepts to description logic and also highlights a brief overview of the research in last 25 years for various approaches for reasoning in expressive DLs. The foundation of OWL DL with tractable reasoning is also presented. The blending of logic families are discussed with extensions of the basic representation language systems.

Keywords
Description and Modal logics, Threshold concept, Knowledge Representation, ABox, TBox

Implementation of Re-ranking a Search Image in Web by Clicking the Similarity and Typicality by using Spectral Clustering

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Abstract:--

Now-a-days searching for a particular Image in web has become a hard task which more over goes with well known semantic gap, intent gap, which is the gap between representations of users demand particularly the process of Image retrieval is the major problem that is curbing its development and also becoming a souring problem as the real objective to the final Users. This paper reduces human effects by using image click-through data which can analysis an "implicit feedback" from users. It overcome the intention gap, and further improves the image search performance. Usually, the premises visually similar images must be close in the ranking list and the strategy images with higher significance should be ranked higher than others are extensively accepted. By obtaining satisfying search results, image similarity and the level of significance typicality with determinate factors correspondingly. Although, measuring image similarity and typicality, conventional re-ranking approaches only consider visual information and initial ranks of images, while overlooking the influence of click-through data. This paper presents an implementation of re-ranking approach, named spectral clustering re-ranking with click based similarity and typicality. Initially, to learn an appropriate similarity measurement click based multi-feature similarity learning algorithm (CMSL), which conducts metric learning based on click based triplets selection, and incorporate multiple features into a unified similarity space via multiple kernel learning. Then based on this learnt click based image similarity measure, we can conduct spectral clustering to group visually and semantically similar images into same clustering and gets the final re-rank list by calculating click based clusters typicality and within clusters where these click based images typicality in descending order. Our implementation will be conducted on two real-world query-image datasets with varied representative queries/demands shows that our proposed re-ranking approach can significantly improve initial search results and gives better several existing re-ranking approaches..

Keywords

Search image, search re-ranking, click-through data, multi-feature similarity, typicality

Social Media Sentimental Analysis During Mumbai Flood

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Abstract:--
This paper has been deep-rooted about the analysis of Mumbai Flood. The analysis of the data about the disaster and emotions in Mumbai has been implemented in the form of a chart using R Programming. The reach or awareness of the Mumbai flood among the people around the world is mainly by social media such as Twitter has been presented in this paper. The mentality of the people during the disaster has been analyzed using R-Programming.

Keywords
Flood, Social media, Mumbai, data, R programming, hash tag, emotions, Twitter