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ICASET-16

18TH - 19TH October '2016

Tirupathi, Andhra Pradesh

Proceeding of

2nd INTERNATIONAL CONFERENCE ON

Applied Science Engineering and Technology

Organized by

Swetha Institute of Technology and Science, Tirupathi

&

Institute for Engineering Research and Publication (IFERP)

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connecting engineers... developing research

2nd ICASET – 2016

02nd International Conference on Applied Science Engineering and Technology

18th - 19th October'16

Tirupati, Andhra Pradesh

Published by:

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Organized by:

Swetha Institute of Technology and Science (SITS)

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C. Ramapuram, Tirupati-517 561

Welcome Message

On behalf of ***Institute of Engineering Research and Publications (IFERP)*** and in association with ***Swetha Institute of Technology and Science (SITS)***, Tirupati, I am delighted to welcome all the delegates and participants from around the globe to ***Tirupati, Andhra Pradesh, India*** for the ***2nd International Conference on Applied Science Engineering and Technology (ICASET-16)*** that will take place from ***October 18-19, 2016***.

Transforming the importance of Engineering, the theme of this conference's assembling is "***Applied Science Engineering and Technology***".

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 & SITS)** 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 **Tirupati, AP.,**

Mr. R. B Satapathy
Divisional Director
South India Division
IFERP International

Preface

The ***2nd International Conference on Applied Science ,Engineering and Technology" (ICASET-2016)*** is being organized by Swetha Institute of Technology and Sciences ,Tirupati, Andhra Pradesh ,India in association with ***IFERP-Institute for Engineering Research and Publications*** on the ***18th - 19th October'2016***.

Swetha Institute of Technology and Sciences has a sprawling student-friendly campus with modern infrastructure and facilities which complements the sanctity and serenity of the divine city of Tirupati in Andhra Pradesh, which is known for its history, mythology ,culture and traditions, with pilgrimage like Thirumala Tirupati Devasthnam.

"With blessings of Lord Venkateshwara the 2nd International Conference on Applied Science ,Engineering and Technology" (ICASET-2016)" was a notable event which brings academia, researchers, engineers, industry experts and students together.

The conference will be a perfect platform to share experience and foster collaborations across industry and academia to evaluate current and emerging trends across the globe.which were given the international valuesbyInstitute For Engineering Research and Publication [IFERP].

The International Conference attracted over 400 submissions. Through rigorous peer reviews 105 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.

ICSPCCR-2016

Smt. M. Rama Devi, M.A., M.Ed., M.Phil., MBA., (Ph.D).
Chief Patron

MESSAGE

I am very happy to note that the Swetha Institute of Technology and Science, Tirupati is organizing An International Conference "ICASET-16" on 18th & 19th October, 2016.

I hope this will provide an exposure about the latest Knowledge for producing efficient Engineers to all the concerned.

I wish the Conference a Grand Success.

Date: 18.10.2016

Place: Tirupati

(M. RAMA DEVI)

Sri. K. Rajagopal Reddy, M.A.,M.Com.,M.Ed.,
Secretary and Correspondent
Patron

MESSAGE

In today's fast changing world there is a demand for new technologies and innovations in every sphere of industry. The ideas that feed the ever growing demand for new designs and applications are derived from the intensive efforts put in by scientists and researchers all over the world who work enthusiastically for the upliftment of the society.

As the Patron of the an International Conference "ICASET-16" on 18th & 19th October, 2016. I am sure and confident that this conference will act as a common platform to share the research ideas emanating throughout the world for further scientific and technical advancement.

I whole heartedly appreciate all the sincere efforts of the entire team of "ICASET-16" and wish them a grand success.

Date: 18.10.2016
Place: Tirupati

(K.RAJAGOPAL REDDY)

Smt.K.R.Swetha, B.Tech., M.S.,
Director, Patron

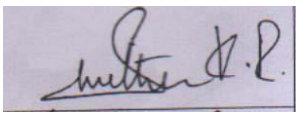
MESSAGE

It s a great pleasure to involve myself in conducting An International Conference "**ICASET- 16**" for the First time in our college.

Such events boost the student's knowledge through discourse on recent changes in the trends.

On this auspicious occasion I would like to convey my best wishes to all of members, staff, students and participants for taking up such type of activities in our college.

Date: 18.10.2016
Place: Tirupati



(K.R.SWETHA)

Sri. P.Nageswara Rao, M.Tech ., (Ph.D).,
Convener

MESSAGE

It is pleasing to note that our Swetha Institute of Technology and Science , Tirupati is hosting a prestigious An International Conference **"ICASET-16"** on 18th & 19th October, 2016.. I feel very happy to lead this event as Conniver.

It is to acknowledge and place on record the magnanimous support provided by the management of Swetha Institute of Technology and Science especially the Chairman, Little Angels Educational Society and the Secretary and Correspondent of our College.

Making this Conference a resounding success, lies in the planned hard work of many. It is my duty to appreciate those who are behind this symposium for taking a step ahead to make a mark in the technological advancements.

Best wishes to all our students!

Date: 18.10.2016

Place: Tirupati

(P.NAGESWARA RAO)

Sri.D. Bullarao M Tech.,
Co-Convener

MESSAGE

It is heartening to note that our college is organizing An International Conference "**ICASET-16"** on 18th & 19th October, 2016. I hope that this Conference will throw enough light on emergent technologies in the field of engineering.

I am sure that this Conference will be of immense use to all those involved in this Conference and the aspirants of Good Environment.

I extend my best wishes for the success of this Conference.

Date: 18.3.2016
Place: Tirupati

D. Bulla Rao

(Bullarao Domathoti)

Profile of

SWETHA INSTITUTE OF TECHNOLOGY & SCIENCE

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DR. VARAPRASAD RAO, Ph.D.,
(EX-DRDO)

Biography:

Dr Varaprasad Earned his Ph.D. in 1979 from IIT Bombay on Piezoelectric SONAR Technology followed by 3 years of Post Doctoral research experience at Microelectronics & Electrical Engineering Department of Trinity College Dublin, Ireland.

Dr Varaprasad is a reputed DRDO Scientist with 3 decades of experience and served at Research Centre Imarat (RCI), Dr APJ Abdul Kalam Missile Complex, and Hyderabad. RCI is the brain child of Dr APJ Abdul Kalam and specialises on Avionics, Navigation systems, Control systems, Radar Systems for Agni, Prithvi, Dhanush and Air Defence/AD Missiles.

Dr. Varaprasad has been awarded Japan Matsumae International Foundation medal in 1987 and Materials Research Society of India MRSI medal in 1990. Other notable contributions of Dr Varaprasad include Piezoelectric SONAR systems for Indian Navy while working at NMRL, Bombay, during 1984-88 ie before moving over to RCI Hyderabad.

Dr Varaprasad retired from Government service in 2012. Now, Dr Varaprasad is Professor of ECE Department at St Ann's College of Engineering & Technology of JNT University, Kakinada involved in teaching Satellite Communications and space technology. Recently he has established a Centre for ISRO GNSS Studies / CIGS at St Ann’s and now promoted as the Director of CIGS.

PROF.P.C.SRIKANTH
Professor and Head
Dept. of ECE, Malnad College of Engineering, Hassan, Karnataka, India

Biography:

Dr. P. C. SRIKANTH had his schooling in the same town and graduated in Electronics & Communication Engineering in 1987 from Malnad College of Engineering, Hassan,Karnataka,India securing a first class with Distinction. Dr. P. C. SRIKANTH completed his M.Tech. degree in 1996 from Indian Institute of Technology, Kanpur in the area of LASERS, and obtained his Ph.D. from VTU Belgaum .

He worked in the applied photonic lab IISc, Bangalore during his PhD. Starting as a Lecturer 1987, he became Assistant Professor In 1999, Professor in 2011 in Malnad College of Engineering, Hassan,Karnataka,India. Dr. P. C. SRIKANTH had a deep involvement in Optical networks, was awarded as **TOP 100 ENGINEERS-2011** by International Biographical Centre, St Thomas' Place,ELY,CB7 4GG Great Britain. He was Selected for Marquis Who's Who in Science and Engineering 2011-2012 (11th Edition), and also in 2016-2017 (12th Edition) New Providence, NJ 07974,USA .

He received Best paper award for the following papers , Modeling of Photonic Crystal Ring Resonator Temperature Sensor during 2014, A Novel Quantum Dot Automata Based Design For Multiplexers during 2015 and Detection of Fluoride Contaminated Water in Dental Applications during 2015 at International Conferences. He has been Awarded as **Outstanding Scientist** in the field of Photonics , by Venus International foundation CARD , on 19th Dec 2015 .

His Research areas includes ,Optical Communication and Networks, Photonic Band gap Crystals, Wireless Networks, LASERS and Quantum Electronics. He has Guided/guiding more than 100 BE ,M.Tech and Ph.d students. Dr. P. C. SRIKANTH has so far published more than 100 papers in national and international journals and conferences.

He has attended many international conferences in India and Abroad and has chaired many technical sessions. He has organized many international conferences and workshops. He has also given many Key note and Invited talks in international conferences and workshops.Awards and laurels won by Dr. P. C. SRIKANTH run into volumes. So far he has received 12 awards. Dr. P. C. SRIKANTH is Senior Member IEEE (USA), Life Member ISTE, Currently he is secretary IEEE Photonic society, Karnataka Chapter Bangalore.

DR. SASIKUMAR GURUMOORTHY., B.E., M.E., Ph.D., DCT (Hons)
Associate Professor
Department of Computer Science and Systems Engineering,
Sree Vidhyanikethan Engineering College in Tirupati, Andhra Pradesh

Biography:

Sasikumar Gurumoorthy is an alumnus of VIT University (VIT), Vellore, Tamil Nadu, India where he completed his Doctoral - Ph.D. (2016) in computer science and engineering. His advisor was Professor Dr.B.K.Tripathy, a famous Indian-born internationally renowned Senior Professor and former Dean from VIT University, Vellore, Tamil Nadu, and India. The title of thesis is "Study of Human Brain Signals for Finding Diseases using Soft Computing Techniques".

Earlier, he obtained his Post Graduation M.E., degree in Computer Science and Engineering from the Anna University, Chennai, India in 2005.

His Under Graduation B.E., degree in Computer science and Engineering from the Madurai Kamaraj University, Madurai, Tamil Nadu in 2003.

He has held various senior positions such as Head of the Department, Chief Superintend and Assistant CS of University Exams. He also serves on the Board of examiners and Board of Studies in Indian Universities. He has published over 60 Research papers in different International Journals and Conferences, more in the area of Intelligent System and Interactive Computing. He authored two reference text books, on "Programming in C and Introduction to Data Structures" in the area of UNIX and Windows operating system.

He has started guiding many research scholars across the world. He has visited London (U.K). His team of researchers is from Finland, USA, UK, Australia, Malaysia, Singapore and Canada. The team is working on several projects utilizing grants from several organizations across the world. He will be roaming around the world as a resource person or speaker for Conferences and Workshops.

He would like to contribute as Invited Speaker, keynote speaker, session chair or for special sessions in conferences and workshops. Also, He would like to be an active member in workshops chairs, program committee board or in reviewing panel of research paper for Conference and Journal. He is a Life Member of CSI-Computer Society of India, IAENG International Association of Engineers, ISTE-Life Member Indian Society for Technical Education, AIRCC- Academy & Industry Research Collaboration Center, IACSIT-International Association of Computer Science and Information Technology, IDES-Life Member, The Institute for Doctors Engineers and Scientists, IFERP-Institute for Engineering Research and Publication, WASET-World Academy of Science Engineering and Technology, INEER-International Network for Engineering Education and Research.

He is involved in organizing a number of research projects Proposals and workshops, Conferences on topics covering Computer science and research activities. He has lectured extensively in these areas both in India and abroad. He has been a member of editor Board of several Journals in the areas of Computer Science. He organized a number of conferences, workshops in Computer science in J.J. College of Engineering and Technology, Kurinji college of Engineering and

Technology, VIT University, Dayananda Sagar College of Engineering and Sree Vidyanikethan Engineering College; in the past ten years, he conducted similar courses in CCNA, FOSS, Computer Hardware, and SAP in around Tamilnadu. He is serving as a mentor for the Institute for Research and Development India-IRD.

For his outstanding contributions in the Wipro-Misson10X has been awarded In Pursuit of Excellence in Engineering Education through Innovation (in 2009) and in the WCE 2010 Best Research Paper award (in 2010,London,UK) by the International Association of Engineers. His research interests are in the areas of Soft Computing and Artificial Intelligence in Biomedical Engineering, Human and Machine Interaction and applications of intelligent system techniques, New user interface, brain-based interaction, human-centric computing.

His e-mail id is: mithrangurugsk@gmail.com
His latest resume and details of talk will be supplied on request.

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***Area of Specialization*:** Soft Computing and Artificial Intelligence in Biomedical Engineering, Human and Machine Interaction and applications of intelligent system techniques, brain-based interaction, human-centric computing, Fuzzy Sets and Systems, Image Processing, Cloud Computing, Cognitive Computing, Content based learning and Social Network Analysis.

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ABSTRACTS

October 18th–19th, 2016 **02nd ICASET-16** ISBN: 978-81-932966-0-8

Organized by:
Swetha Institute of Technology and Science (SITS)
And
Institute For Engineering Research and Publication (IFERP)

02nd International Conference on
Applied Science Engineering and Technology (ICASET-16)
October18th - 19th, 2016Tirupati, Andhra Pradesh

Developmental Direction of Welding Materials and Processes to Improve the Effectiveness

J.Ramachander, Sr. Assistant Professor, HOD of Mechanical Engineering, Sri Venkateswara Engineering College, Suryapet

ABSTRACT

Demands for improved productivity, efficiency, and quality pose challenges to the welding industry. As materials become ever more sophisticated in their chemical composition to provide ever-better functionally specific properties, a more complete and precise understanding of how such materials can be joined for optimal effectiveness and efficiency will become essential. Traditional options for welding will surely evolve, sometimes to provide unimagined capabilities. In addition, totally new methods will almost certainly emerge as evolution of materials gives way to revolution to meet unimagined new designs and design demands.

The paper considers process systematization and corresponding advances of constituent technologies, discusses some of the role and future direction of welding technology, welding materials, productivity and efficiency, education and safety having an impact on future growth in welding technology. Analysis of drivers and the key needs of some manufacturing industries have been researched, giving general trends and strong indications as to expected trends in technology that will be seen in the future. It also provides a good foundation for future research and creates awareness of the developmental direction of welding processes and materials in manufacturing industries.

02nd International Conference on
Applied Science Engineering and Technology (ICASET-16)
October18th - 19th, 2016Tirupati, Andhra Pradesh

Studies on Behavior of welded Beam-Column Joints

Prashant V M, M. Tech student, Department of Civil Engineering, P.D.A College of Engineering, Kalaburagi-585102
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ABSTRACT

Welding is the process of joining two pieces of metal by creating a strong metallurgical bond between them by heating or pressure or both. Welding offers many advantages over bolting and riveting. A test program was carried out to investigate the behavior of welded beam-column joints such as unstiffened seated connection, stiffened seated connection and moment resisting connection under static loading condition. Finite element analysis was performed on beam column joint using ANSYS software and the analyzed results are validated with experimental results. It was observed that load carrying capacity and resilience of seated connection was more than that of other two types of connection. Modified ANSYS results for deflection were in close agreement with experimental results.

Keywords: -- ANSYS, deflection, moment resisting connection, slope, stiffened seated connection, unstiffened seated connection.

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Studies on Behavior of Bolted Beam-Column Joints

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ABSTRACT

The behaviour of joints or connections is very complex due to the various factors which influence them, such as geometric imperfection, lack of fit, residual stresses, connection flexibility, geometric complexity, slipping, and non-linear load deformation characteristics. In bolted joints, a variety of components such as angles cleats, end plates, stiffeners, and bolts are used to transfer and disperse loads from one member to the other. Due to use of bolts continuous load paths are employed to transfer the loads. Connections are often the critical component in a structure, and if they fail, progressive collapse is imminent. Therefore, a test program was aimed at investigating the behavior of a bolted beam-column connection such as unstiffened seated connection, stiffened seated connection, and moment resisting. Non-linear analysis was also performed using ANSYS software to compare the results. The study revealed that stiffened seated connection has got higher load carrying capacity and resilience. The analytical approach by ANSYS method can be adopted using modification factors.

Keywords: -- ANSYS, bolted beam-column joints, deflection, slope.

XFEM Simulation of Semi Permeable Crack in Piezoelectric Materials

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ABSTRACT

Wide research is being carried on to investigate effect of electromechanical coupling behavior on fracture and crack growth of piezoelectric materials. In the present paper quasi-static crack growth using semi-permeable crack boundary conditions in a piezoelectric material has been analyzed using the extended finite element method (XFEM). Combined Mechanical and Electrical loading has been applied on a pre-cracked rectangular plate made of piezoelectric material with crack at its edge and centre. Stress intensity factors have been evaluated by interaction integral approach using the asymptotic crack tip fields.

Key wards: — crack growth, piezoelectric material, quasi-static, semi-permeable, XFEM

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Fatigue Life Prediction of Crankshaft of Pulsar 180 Engine

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ABSTRACT

The crankshaft of the engine is a most critical part in the engine as it is a heavy structure with complicated geometry. During working due to repetitive bending and shear

stresses are usual stresses induced in the crankshaft, which are solely responsible for the crankshaft failure by fatigue. Thus, the assessment of the fatigue strength and life evaluation of the crankshaft assumes a vital part in the design and development of the crankshaft, taking into account of its safety and reliability during the operation. The Pulsar 180 DTS-i engine is considered for analysis which is made up of forged alloy steel 41Cr4Mo[1]. However, the analysis is also carried out by changing the material grey cast iron SAE J431 G2500 to compare the results. The static strength and fatigue failure criteria of the crankshaft are predicted analytically using S-N approach and modified Goodman theory. The 3D geometric model of crankshaft is created by reverse engineering. The FE model of the crankshaft is then developed using ANSYS Workbench. The investigation of the static structural strength and fatigue life is done utilizing ANSYS Workbench desktop software code and are validated with analytical solutions. Fatigue lives of the crankshaft for both forged alloy steel and grey cast iron are predicted based Von-Mises theory (Distortion Energy theory) and Maximum Principal Stress theory and are compared. Also the variation of fatigue lives of both forged alloy steel and grey cast iron crankshafts with different values of mean stress are predicted and compared. The evaluated results are graphically presented and discussed.

There was a close agreement between the results in the Von-Mises stress obtained by analytical and FEA, which was 258 MPa by the analytical calculations and 248.11 MPa from the FE analysis and maximum stress obtained by both analytical and FE analysis were less than the ultimate tensile strength 1020 MPa of the material AISI 4140 alloy steel. The fatigue life of the forged alloy steel Crankshaft is 66% higher than the grey cast iron Crankshaft. And also the fatigue life increases with increase in the value of mean stress.

Keywords—Fatigue life, LEFM, Mean Stress, Crankshaft, Crankpin, FE modeling, ANSYS.

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A Novel Cascaded Two-Level H-Bridge Voltage Source Inverter Based STATCOM for High Power Applications

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ABSTRACT

In this paper presents a var compensation by a cascaded two-level H-Bridge VSI based multilevel static compensator (STATCOM) using SVPWM. The topology consists of two voltage source inverters are connected in cascaded through a 3-phase transformer. The benefit of this topology is that by maintaining asymmetric voltages at the dc capacitors of the inverters, the levels in the waveform of output voltage can be increases. This results power quality (PQ) improved. The main object of this paper is balancing the dc link capacitor voltages of multilevel inverters during balancing and unbalancing conditions. This controller is controlling inverter voltage in such a way that either –ve sequence current flowing into the inverter is eliminated or reduces the unbalancing in the grid voltages. The performance of the control scheme during balanced and unbalanced conditions is analysed through MATLAB/SOMULINK.

Key words:-- Dc link capacitor voltage balance, Power Quality (PQ), Multilevel voltage source inverters (VSI), Static Compensator, (STATCOM), Volt-Ampere Reactive (VAR), space vector pulse width modulation (SVPWM).

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Use of Soft Computing Techniques in Robotic Arm

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ABSTRACT

In this paper, we have shown technological evolution and the advances made in the designing of a robotic arm and how over the years soft computing techniques like Neural Networks, Fuzzy logic, Genetic Algorithms (GA), etc. have helped us achieve the desired level of automation. Here we have proposed a robotic arm which sorts primary colours-Red, Blue

and Green (RBG) and has judging abilities to deal with uncertainties like distorted inputs and non-primary colours. Analysis of time response of the robotic arm using hybrid of neural network and ant colony optimisation (ACO), / particle swarm optimisation (PSO) technique is expected to be better and faster time response in comparison to a standalone Proportional-Integral (PI) controlled implementation.

Keywords:—Ant Colony Optimisation (ACO), Neural Networks (NN), Proportional-Integral (PI), Particle Swarm Optimisation (PSO), Red-Blue-Green (RGB).

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PAPR Reduction in SFBC MIMO OFDM System Using AMS Schemes

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ABSTRACT

Accelerated information prices and reliability are the 2 key factors required to aid emerging multimedia applications and new communications technology. The two techniques utilized in excessive facts charge transmission are orthogonal frequency division multiplexing (OFDM) and multiple-input a couple of-output (MIMO) scheme. The OFDM is used to mitigate the hassle of inter image interference (ISI) and presents properly protection towards co-channel interference and noise. MIMO system helps to reduce fading and can be used for reducing bit blunders charge that is spatial range or to increase the data rate that is spatial multiplexing. The combination of MIMO and OFDM is MIMO-OFDM gadget. MIMO-OFDM machine is used to converts frequency selective MIMO channel into multiple parallel flat

fading channels. One of the greater important drawbacks of MIMO-OFDM system is that transmitted signal suffers from highest peak to average power ratio (PAPR). On this paper, AMS techniques have been used to lessen height to average power ratio (PAPR) in a couple of enter more than one output orthogonal frequency division multiplexing (MIMO OFDM) gadget with area frequency block coding (SFBC). The AMS technique reduces the computational complexity and whilst AMS technique is used with quadrature amplitude modulation (QAM). Simulation and outcomes show that the AMS technique reduces PAPR more effectively than the SFBC scheme.

Key words:-- AMS, PAPR, MIMO-OFDM

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Performance Evaluation of 43 MLD Sewage treatment plant at Vadodara

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ABSTRACT

The present study has been undertaken to evaluate the performance of 43 MLD Sewage Treatment Plant (STP) located at Vadodara which is based on UASB process. The Performance Evaluation will also help for the better understanding of design and operating difficulties in Sewage Treatment Plant. Sewage samples were collected from different locations i.e. Raw sewage, UASB outlet and Outlet of the Treatment Plant and analysed for the major waste-water quality parameters, such as pH, Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), MLSS. The performance efficiency of each unit & overall STP in treating the pollutants was calculated. The conclusions of these evaluations may determine required recommendations and focus on modification requirements for the STP and will also determine whether the effluent discharged into the water body are under limits given by GPCB. The conclusions drawn from this study will outline the need for continuous monitoring and performance analysis by removal efficiencies of each and every unit of STP.

Keywords:--UASB- Upflow Anaerobic Sludge Bed, STP- Sewage Treatment Plant, BOD- Biological Oxygen Demand, COD- Chemical Oxygen Demand, GPCB- Gujarat Pollution Control Board.

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Spectrum Handoff and Power Adaptation in MIMO-Mobile CRN

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ABSTRACT

Multiple Input and Multiple Output (MIMO) and Orthogonal Frequency Division Multiplexing (OFDM) system have the potential to achieve a very high capacity relaying on the propagation environment. The main objective of this paper is to allocate resources on MOBILE-CRN using the adaptive resources allocation in MIMOOFDM system by using the water filling algorithm. Water filling solution is implemented to allocate power in order to decrease channel capacity for power consumption. A MOBILE -CRN-Advanced cooperative cellular network where a Type II relay station (RS) is deployed to boost the cell-edge throughput and extend the coverage area. To better exploit the existing resources, the RS and eNodeB (eNB) transmits in same channel (In-Band) with decode-and-forward relaying strategy. For such a type of network, in this paper we propose a joint Orthogonal Frequency Division Multiplexing (OFDM) subcarrier and power allocation schemes to optimize downlink multi-user transmission efficiency.

Keywords: -- MISO, MIMO, MOBILE-CRN, and WATERFILLING.

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Design and Verification of AMBA 3 AHB Lite Protocols by using GO2UVM Package

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ABSTRACT

The AMBA 3 AHB protocol design act as an interface between two different IP cores. The current project emphasis on AMBA 3 AHB lite where the design and verification of a flexible burst operation is proposed. Basically, AHB lite burst operation is a sequence of operations that happens with respect to the size given and it supports only three burst sizes. During the burst operation, the size acts as one of the inputs to the master. After each burst operation, the master or slave will go to the IDLE stage. The AHB lite design contains basic blocks like master and slave, and the working of these blocks is without arbitration scheme. According to this scheme one master can access the bus at one time. The present work is on AHB-Lite master and slave model, at different test cases and describing their simulation Accuracy is 100%. It is built by the standard language GO2UVM package on the relevant simulator Riviera.

Keywords: — Advanced Microcontroller Bus Architecture (AMBA), Advanced High Performance Bus (AHB), Advanced Peripheral Bus (APB), Universal Verification Methodology (UVM).

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Experimental Investigation on Rhombus Grooved piston with Jatropha Biodiesel and Al_2O_3 Nano Fluid

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ABSTRACT

The CI engines fuelled with diesel plays a very vital role in Industrialization and transportation sectors. However, the depletion of petroleum products isincreasing day to day. Due to high emissions from the petroleum products there is a strict regulations lay down by the government to the engine manufactures to save the environment from the pollution.Hence the researchers are in the processes of identifying a suitable alternate fuel i.e.biofuelssuch as Jatropha oil, Pongamia oil, Rice bane oil, Corn oil, Neem oil etc. Among all jatropha is considered to be the best replacement because these plants can grow in any environmental conditions and the properties are also nearer to diesel. With minor changes in the diesel engine, Jatropha biodiesel can be directly replaced with diesel. But one of the major drawbacks of Jatropha biodiesel are its flow characteristics and the viscosity of the fuel. In the present work to overcome this, nano additive (Aluminum oxide) is added to the biodiesel which enhances the properties of the fuel. The performance and emissions of diesel engine is experimentally investigatedwith biodiesel 20% by volume (B20) by using the nano additive 50 ppm, 100 ppm and 150 ppm. The performance of the engine depends on the formation of homogeneous mixture and turbulence inside the combustion chamber. Hence in the current work six number of Rhombus grooves are created on the piston crown to enhance turbulence in the chamber and results in the enhance of performance and reduction of the engine emissions. Among all blends the B20 biodiesel with 100 ppm nano additive showed better performance compare to diesel

Key words: - Aluminum oxide, Emissions Characteristics, Grooved piston, Jatropha Biodiesel, Nano additives, Normal piston, Performance.

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Redistributing Routing Protocols

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ABSTRACT

A distributed routing protocol system that is the use of a routing protocol to advertise routes that are learned by some other means, such as by another routing protocol, static routes, or directly connected routes, is called redistribution. While running a single routing protocol throughout your entire IP internetwork is desirable, multi−protocol routing is common for a number of reasons, such as company mergers, multiple departments managed by multiple network administrators, and multi−vendor environments.

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History & Web Search Engines Works

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ABSTRACT

A web search engine is a software system that is designed to search for information on the World Wide Web. The search results are generally presented in a line of results often referred to as search engine results pages(SERPs). The information may be a mix of web pages, images, and other types of files. Some search engines also mine data available in databases or open directories. Unlike web directories, which are maintained only by human editors, search engines also maintain real-time information by running an algorithm on a web crawler.

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Energy efficient utilization of resources in cloud computing systems

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ABSTRACT

The energy consumption of under-utilized resources, particularly in a cloud environment, accounts for a substantial amount of the actual energy use. Inherently, a resource allocation strategy that takes into account resource utilization would lead to better energy efficiency; this, in clouds, extends further with virtualization technologies in that tasks can be easily consolidated. Task consolidation is an effective method to increase resource utilization and in turn reduces energy consumption. Recent studies identified that server energy consumption scales linearly with (processor) resource utilization. This encouraging fact further highlights the significant contribution of task consolidation to the reduction in energy consumption. However, task consolidation can also lead to the freeing up of resources that can sit idling yet still drawing power. There have been some notable efforts to reduce idle power draw, typically by putting computer resources into some form of sleep/power-saving mode. In this paper, we present two energy-conscious task consolidation heuristics, which aim to maximize resource utilization and explicitly take into account both active and idle energy consumption. Our heuristics assign each task to the resource on which the energy consumption for executing the task is explicitly or implicitly minimized without the performance degradation of that task. Based on our experimental results, our heuristics demonstrate their promising energy-saving capability.

Keywords: -- Cloud computing • Energy aware computing • Load balancing • Schedulin

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Design of Fixed Parameter Decentralized Power System Stabilizers for Multi Machine Power Systems

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ABSTRACT

This paper proposes a technique to design fixed parameter decentralized Power System Stabilizers (PSSs) for interconnected power systems. To tune the parameters of a PSS, local information available at each machine in the multi-machine environment is used. Frequency Response estimation called GEP(s) between AVR input and resultant torque is also used, with the knowledge of equivalent external reactance incorporated at generating unit of step-up transformer and infinite bus voltage or their estimated values at each machine. Conventional design techniques like P-Vr frequency response approach and method of residues are based on complete system information. In the proposed method, information available at high voltage bus of step-up transformer is used to set up a modified Heffron – Phillip's model, thus to decide the structure of PSS compensator and tune its parameters at each machine in a multi-machine environment by the signals available at Generating Station. The efficacy of the proposed stabilizer to damp out inter area and local modes of oscillations effectively over a wide range of operating conditions is evaluated by a wide area system. Simulation studies compare the proposed stabilizer with conventional design.

Keywords:—Power System Stabilizer, Small Signal Stability, Power System Dynamic stability

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Developing Controller and Optimizing Parameters for Improving Tensile Strength and Heat Affected Zone of Spot Welded Joint using Grey Based Taguchi Method

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ABSTRACT

In the first part of the present work, a controller was developed and mounted on a pedal operated spot welding machine to control weld time, hold time and squeeze time. Later, the machine was used to optimize the welding parameters to improve the Tensile Shear Strength (TSS) & reduce Heat Affected Zone (HAZ) of spot welded joint between dissimilar metallic sheets of stainless steel and mild steel each of thickness 1 mm. The four input parameters weld time; hold time, weld current & electrode force were selected. Grey based Taguchi method was applied with L_{27} orthogonal array & MIITAB 17 software was used to perform Analysis of Variance (ANOVA).Weld time was found to be the most significant parameter. The Grey Relational Grades obtained from the confirmation experiment was found quite close to that calculated for optimal combination (A_1,B_2,C_3,D_2).

Keywords: — dissimilar metallic sheets, Tensile Shear Strength, Heat Affected Zone, Grey relational analysis, Analysis of Variance.

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An Experimental Study on the Behavior of Partially Replaced Coarse Aggregate in Concrete with Coconut Shells in Acidic Environment

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ABSTRACT

In the present work coconut shell as partial replacement for coarse aggregate in concrete is studied. An attempt have been made to examine the suitability of replacing the 20% of Fly Ash and 20% of coconut shells and samples with replacement of 0%, 10%, 20% and 30% of coconut shells for a concrete of grade M35.Examine strength characteristics such as compressive strength of concrete mix for 7,28,56 days of curing period and durability characteristics such as Acid Attack test, Acid durability Factor of concrete mix for 30,60,90days results are analyzed and compared with the conventional Mix.

Keywords:-- Concrete, Fly Ash, Compressive strength, Durability characteristics

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Research Work on Conversion of Environmental Waste to Energy - Electrical Energy

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ABSTRACT

Waste the term which is usually creates a feeling of untidiness and unused matter in environment/ society. We know that now a day's consumption of Electric energy is majorly employed in every industry, companies, domestics, etc. and it very essential for all. We know

that present resources and fossil fuels are getting extinct. So, there is a necessity to find the alternative ways for production of electricity. This project deals with great applications and management of the waste in an eco-friendly manner. The process of producing electric energy from the waste and utilization of its by-products such as fly ash bricks, manure, and gasification are discussed

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Power Quality Enhancement by Reduction of Harmoins using Fuzzy Logic

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ABSTRACT

In today's commercial world, multilevel inverters are playing a significant role from power failure. Harmonics is a major problem in power systems that have become serious recently owing to the wide use of power electronics related equipment. In this process, there is a possibility of generation of harmonic peaks because majority of the power utilities are non-linear loads. A high performance multilevel inverter should have a clean output voltage with low total harmonic distortion (THD) for both linear and non linear loads. Harmonic distortion is the most important power quality problem occurring in multilevel inverter, the harmonics can be eliminated by an optimal selection of switching angles. A hybrid evaluation technique evaluates the obtained optimal switching angles that are attained from the fuzzy inference system as well as neural network. The proposed technique is tested with a seven level cascaded H-bridge inverter. The proposed method will be implemented in MATLAB working platform and the harmonic elimination performance will be evaluated.

Keywords:-- Power quality, Harmonics, Switching angles, THD, Multilevel inverter

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Analysis of Security and Privacy Features in Map Reduce On Clouds

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ABSTRACT

Map Reduce is a programming prototype that enables for huge scalability across hundreds or thousands of servers in a Hadoop.. Map Reduce is extensively used daily around the world as an efficient distributed computation tool for a huge class of problems such as search, clustering, log analysis, different types of join operations, pattern matching, matrix multiplication and analysis of social networks. Privacy and security of data and Map Reduce computations are significant concerns when a Map Reduce computation is implements in public or hybrid clouds. In order to perform a Map Reduce functions in hybrid and public clouds, authentication of mappers-reducers, privacy of data-computations, Integrity and

reliability of data-computations and freshness-correctness of the outputs are mandatory. Satisfying these necessities defend the operation from a number of types of attacks on data and Map Reduce computations. In this Security and privacy challenges and needs, considering a range of adversarial capabilities, and characteristics within the scope of Map Reduce. We presented security and privacy protocols for Map Reduce and talk about their transparency problems.

Keywords:-- Cloud computing, Hadoop, HDFS, hybrid cloud, public cloud, private cloud, Map Reduce algorithms, distributed computing, privacy, security

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An Approach for Storing the Medical Data of HIV Patients Using Big Data Technologies

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ABSTRACT

Medical science has a huge amount of data. This data can be collected from different places like patient database, pathology, blood bank , X-ray clinics etc. day by day this data gets increased and hence we need to store it so that same can be retrieved in future within no time. There are many diseases like HIV where one/doctor needs to keep all information of a patient including hobbies, habits, status and other medical parameters. This paper proposes a new

approach to store this big data in a systematic format so that treatment can be started in no time and hence there will be an easy access to all medical records with an ease.

Keywords:--- Big Data, Hadoop, HIV, data mining.

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A Comprehensive Survey on MEMS Technology in RF as Road Map towards Future Research

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ABSTRACT

Since 1980 there has been significant research with MEMS switch in the field of RF (Radio Frequency). In every 3-5 years there have been a break through achieved with MEMS in RF technology. This breakthrough include improvement in the switching voltage, improvement in the overall pass-band, improvement at the insertion loss and improvement at the switching speed. Currently MEMS switch offers a tremendously high frequency around 70GHz in comparison to FET which offers 4GHz, similarly diode offers 20GHz, EMR 5GHz, EMRSMA 40GHz . Even though insertion loss is now reduced to 0.25db, switching voltage has come down to 2 to 4 V, there are areas where MEMS still need significant amount of research in terms of unit cost MEMS switches are significantly high value in comparison to

other peers, have present lesser less life time and represent high switching power (even though switching power comedown.

A dedicated research is needed in the direction of MEMS based RF technology to improve this factor were they lag other semiconductor counterpart. This research requires and understanding of technological advancement in the area of MEMS along with the parameter and factor that have resulted changes and advancement. In this paper we present historical water fall in the advancement of MEMS over RF technology along with comprehensive analysis with the other parallel technology in terms of standard matrices and theoretical foundations.

Keywords:--- RF MEMS, Insertion Loss, Switching Voltage, Pass-band Frequency

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Design and Simulation Model of Solar Based Battery charger and Standalone mode Micro Inverter for Residential Applications

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Mukesh Kumar Dewangan , National Institute of Science & Technology
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ABSTRACT

Solar energy utilization for many applications is growing in as good phase. As PV module converts solar energy into electrical energy and this electrical energy used for charging the battery for supplying the local load, the design of battery charger and micro inverter for residential applications, mostly in remote villages where power is not available, is much more in need. The present paper deals with the design and simulation model of solar based lead acid battery charger cum micro inverter system, which can be used in remote village locations for the supply of power for maximum of 900W. Also constant current and constant voltage based

battery charging algorithms are discussed. Entire system is integrated and simulated for different conditions to validate the model and simulation results are presented.

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A Study on Need of Inclusive Development and Environment Sustainability in India

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ABSTRACT

With 1.2 billion people living and expected to increase by another 300 million in coming decades, India is definitely going to face lofty demands of resources to satisfy the needs of its people. Having realized that the existing non-renewable resources are not sufficient for the current as well as the future needs, it is very important for India to avail its immense treasure of renewable resources by adopting sustainability. Procuring sustainability is a hard row to hoe. This paper mainly focusses on the situation of India and the challenges it is facing in utilizing the available natural and non-renewable resources in an efficient way to reduce the stress on these resource utilization, keeping in mind the needs of the future generation. Various aspects such as water risk management, adoption of renewable energy, waste management have been discussed in this paper. Finally an attempt is made in this paper to drive the attention of the aspiring and growing companies towards sustainable development. In this context, this paper presents some examples of successful corporates of India who are triumphant in employing sustainable development industries by giving problem-based-solution and explains the methodologies adopted by them to contribute towards the 175GW of energy goal of India.

Keywords:—RE, Sustainable, Waste, Water

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A Case Study on Sustainable Development in India

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ABSTRACT

The concept of Sustainable Development is an attempt to combine growing concerns about a range of environmental issues with socio-economic values. To aid understanding of these different policies a classification of different trend of thought is necessary. To meet the ever increasing needs of the rapid urbanization one such area that needs to be developed is the airport. Airports are the air transport system's nodes and have major impact on a region's economy, social conditions and environment. An Airport can only be considered to be operating sustainably if all three dimensions are balanced. Airport Sustainability can be evaluated at global, national and regional levels.

This paper emphasizes the importance of regional level planning in analyzing airport sustainability. The paper presents a detailed case study of Chhatrapati Shivaji Mumbai International Airport and evaluates its sustainability on regional level under different growth and reduction scenarios. The airport concentrates on the environmental performance, global connectivity, local employment, resource optimization. Moreover, the basic concepts like waste water, air quality and noise management, solid waste management are been stressed. The construction of the airport posed a lot of hindrance for the engineers as they had to tackle the geographical and climatic conditions around the airport. Also to tackle the wildlife incursions and strikes into the airside a close watch is kept on all the birds. The increase of roadways around the airport has elevated the overall transportation capacity. Managing water resources, waste water treatment and using the recycled waste is one of the prominent traits of the airport, the peacock shaped feather skylights for natural lighting and the use of energy efficient materials in construction has led the Mumbai Airport from a worn airport to one of the world's top airport giving it a gold certification from LEED [4].

Keywords:--Airport, Energy efficient materials, Environmental Performance, Sustainable Development

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A Step towards Sustainable Environment for Better Tomorrow

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ABSTRACT

Sustainability is a process in which the design, planning and construction are done in such a way that it minimizes the total environmental impact while enhancing user comfort and productivity. This paper mainly focuses on the achievement of CII - Sohrabji Godrej Green Business Centre (CII Godrej GBC), the first LEED platinum rated building in India, in the field of sustainability with the combination of high tech innovative techniques and efficient resource using methods. The paper describes the effective implementation of the sustainability parameters in the building such as incorporating traditional concepts into modern and contemporary architecture like extensive landscaping, incorporating solar PV systems, indoor air quality monitoring, a high efficiency HVAC system, a passive cooling system using wind towers, high performance glass, aesthetic roof gardens, rain water harvesting, and root zone treatment system which reduces adverse effects of the building on environment. As a result, CII Godrej GBC gasconades a 50% saving in overall energy consumption, 35 % reduction in potable water consumption and usage of 80% of recycled/recyclable material, which is much more as compared to the conventional green building [1].

The paper also emphasizes on how these techniques and methods can be implemented in every commercial or residential building at small or large scale, which will not only improve the present environmental conditions of the country to a large extent but also reduce the exploitation of natural resources.

Keywords: - sustainability, environmental impact, green building, resource utilization

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Spray Characteristics of Biofuel- A Review

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ABSTRACT

The depletion in fossil fuel and its increasing demand, along with the hazardous emission are some important issues which are leading scientist to research for alternative fuel to replace this fossil fuel. This alternative in case of C.I engines can be biodiesel. Biodiesel is basically a vegetable oil-or animal fat based diesel fuel consisting of long chain alkyl (methyl, ethyl, or propyl) esters. This review aims to study and discuss the result of various researches done by few researchers around the world, to study the spray characteristics of biodiesel fuel in controlled environment. These thoroughly conducted researches were aimed to identify a fuel in order to successfully replace the classical fuel for compression ignition engines without engine alteration. Spray process being an important part of C.I engine combustion process is one of the major research areas while performing these studies. In general, it was found that the biodiesel sprays penetrate faster and have narrow spray angle along with large droplet size compared to diesel. However, these studies are still in early stages and we believe that the mixture of biodiesel-ethanol-diesel fuel can be used to power C.I engines in terms of forming a fuel-air mixture, but further research is needed in order to assess the efficiency, pollution and reliability of the engine running with this fuel.

Keywords:-- Spray, Biofuel, Injection Pressure

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Suppression of Harmonic Resonance in Industrial Power Systems Using Hybrid active filter with Variable Conductance

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ABSTRACT

Unintentional series and/or parallel resonances, due to the tuned passive filter and the line inductance, may result in severe harmonic distortion in the industrial power system. This paper presents a hybrid active filter to suppress harmonic resonance and to reduce harmonic distortion. The proposed hybrid filter is operated as variable harmonic conductance according to the voltage total harmonic distortion; therefore, harmonic distortion can be reduced to an acceptable level in response to load change or parameter variation of the power system. Since the hybrid filter is composed of a seventh-tuned passive filter and an active filter in series connection, both dc voltage and kVA rating of the active filter are dramatically decreased compared with the pure shunt active filter. In real application, this feature is very attractive since the active power filter with fully power electronics is very expensive. A reasonable tradeoff between filtering performances and cost is to use the hybrid active filter. Design considerations are presented, and experimental results are provided to validate effectiveness of the proposed method. Furthermore, this paper discusses filtering performances on line impedance, line resistance, voltage unbalance, and capacitive filters.

Keywards:—Harmonic resonance, hybrid active filter, industrial power system

Smart Library: An IoT approach

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ABSTRACT

The revolution created by Internet of Things due to the widespread use of smart phones with internet access has started [1][10]. Like other services in the industry, IoT can help in the advancement of the services provided by libraries [2]. In this paper, an effective implementation for Internet of Things used for managing the library by means of low cost NFC tags and readers is reported. The description about the integrated network architecture and the interconnecting mechanisms for the transmission of data via internet is being presented.

*Keywords:-*Internet of things (IoT), Radio Frequency Identification (RFID), Near Frequency Communication (NFC)

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Incorporating Location Based Remainders and Friend Locator into Geo-Social Applications

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ABSTRACT

Now a day, geo-social applications have become a part and parcel of our lives. These applications may be misused by someone to extract our personal information. This paper puts forth LocX that provides ameliorated privacy and at the same time gives precise results. The prime concept is to utilize secure coordinate transformation. This transformation could be used only by friends of a particular utilize. Here the distance metrics are maintain by coordinate transformations the queries are perform enhancing the task of servers on transformed data. This transformation is a safe one, since the secret is the key to the data, which is available only to the user's group. Here, we endeavor to show that LocX has the capability to provide privacy to do the task efficiently, making it proximate to idealize for the applications of the present day. It sanctions the server to work congruously and correctly without using the private data of the utilizer. There are users where there is not a desideratum for impulsive pairs of users to be resolved. Hence, by spotting such location data through users' convivial groups further transformation can be applied on location coordinates.

Keywords:- Security, Efficiency, Location privacy, location-based social-application

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NPIT Approach for Bypassing the Exact Location of IP Spoofers Using Path Backscatter Messages

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ABSTRACT

It is long known attackers may just utilize original supply IP area to duvet their actual areas. To seize the spoofers, more than a few IP trace back mechanisms were proposed. However, due to the challenges involving deployment services, there was now not any largely adopted IP trace back solution, as a minimum at the internet level. Therefore, the mist on the

places of spoofers has in no way been dissolute till now. This paper proposes passive IP trace back (PIT) that bypasses the deployment difficulties of IP trace back systems and comes up with a option to the obstacle. PIT investigates Internet Control Message Protocol (ICMP) error messages (named path backscatter) prompted with the aid of spoofing site visitors, and tracks the spoofers centered on public to be had expertise akin to topology. Alongside these lines, PIT can discover the spoofers and not using a association necessity. This paper represents the explanations, accumulation, and the factual results on means backscatter, exhibits the tactics and adequacy of PIT, and demonstrates the caught areas of spoofers by way of making use of PIT on the way in which backscatter expertise set. These outcomes can support additional expose IP spoofing, which has been studied for lengthy however in no way good understood. As given that of some boundaries PIT cannot work in all the spoofing assaults, it could be a invaluable mechanism of tracing a spoofers before an internet-degree traceback system has been deployed in actual..

Keywords: - Computer network management, computer network security, denial of service (DoS), IP trace back

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Comparative Efficiency Analysis of K-Means, Fuzzy Class and Rough Class Clustering Algorithm with IRIS Dataset with Multiple Centroid

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ABSTRACT

Data analysis is considered as an efficient and handy tool for processing huge amount of data which is very tough and data mining technology identifies patterns and trends of these data. This technique is used to extract the unknown pattern from a large dataset helping unreal time applications. Raw data from this dataset are classified by using cluster analysis-an important method for classifying data, finding clusters based on similarities with the same cluster and dissimilarities with others. There are various algorithms which are used to solve

this problem like, K-Means, Fuzzy C Means (FCM), Rough C means, and Rough Fuzzy C means. A comparative study of these algorithms is done in this paper. These algorithms are implemented in MATLAB using a set of real life data sets. So, this paper is a blend of Mathematics, Statistics and Computer Application.

Keywords:--Data analysis, data mining, K-means, Fuzzy C Means, Rough C Means, Rough Fuzzy C-Means

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A Critique of IPS Tenors

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ABSTRACT

The Internet has experienced tremendous growth. Along with the widespread evolution of new emerging services, the quantity and impact of attacks have been continuously increasing. Defence system and network monitoring has become an essential component of computer security to predict and prevent attacks. Defense system and network monitoring has becomes essential component of computer security to predict and prevent attacks. Unlike traditional Intrusion Detection System (IDS), Intrusion Prevention System (IPS) has additional features to secure computer network system. In this paper, we present mapping problem and challenges of IPS. When this study was started in late 2000, there are some models and theories have been developed. Unfortunately, only a few works have done mapping the problem in IPS area, especially in hybrid mechanism.

Keywards: — Intrusion detection, Intrusion prevention

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Performance Investigation of Multilevel Inverter Based Static Synchronous Series Compensator for Power Flow Control

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ABSTRACT

This paper consists of control logic of Five-Level Flying Capacitor Multilevel Inverter (FCMLI) based Static Synchronous Series Compensator (SSSC) has been proposed. SSSC which is connected in series with the transmission line is preferred to other compensating devices because apart from controlling the active and reactive power flow, it helps to damp out unnecessary oscillations, reducing the Sub-Synchronous Resonance (SSR) and helps in improving the Power Quality (PQ). Hence, FCMLI is used which helps to ameliorate the output waveform and reduces the auxiliary filtering requirements. Moreover, the control logic for the inverter that has been shown in such a way that voltage stress across each capacitor connected to DC-link voltage is equal. The control logic has been implemented in MATLAB/Simulink environment and the result is shown as there are no SSR phenomena and considerable less line loss.

Keywords: -- Multilevel Inverter, FCMLI, Power Oscillation, Power Quality, FACTS-Controller, SSSC, SSR, VSC, SPWM

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Personalized Promotion Tracking: A Location Based Approach for Merchandizing Industry using Haversine Formula

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ABSTRACT

In this proposed application, personalized promotion is realized by an individual where the mobile client enables the application to get offers, discounts from nearby merchants on mobile devices. This application continuously keeps track of the constantly moving mobile clients coming under the periphery of the static data objects which represents the merchant office. A distance based circular area is defined for every store and if any customer enters in this geographical area with proper connected network through GPS or mobile they will get promotional offer with respect to his or her previous offer avail. Author use goggle maps for describing geographical area.

This application is an approach which allows a retailer to promote products or services by using geographical position of a mobile device to targeted customer consistently and efficiently.

Keywords: — GPS, Haversine formula, K-means, Promotion, Resourceful applications, Web Client

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A New Secure Image Transmission Technique via Secret Fragment-Visible Mosaic Images by Nearly Reversible Color Transformations

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ABSTRACT

A new secure image transmission technique, which transforms automatically a given large-volume secret image into a so-called secret-fragment-visible mosaic image of the same size. The mosaic image, which looks similar to anarbitrarily selected target image and may be used as a mask of the secret image, is yielded by dividing the secret image into fragments and transforming their color characteristics to be those of the corresponding blocks of the target image. Skillful techniques are designed to conduct the color transformation process so that the secret image may be recovered nearly lossless. A scheme of handling the overflows/underflows in the converted pixels color values by recording the color differences in the untransformed color space is also proposed. The information required for recovering the secret image is embedded into the created mosaic image by a lossless data hiding scheme using a key. Good experimental results show the feasibility of the method.

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De-Noising of Medical image using Wavelets

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ABSTRACT

De-Noising of images is an important task in image processing and analysis, and it plays a significant role in modern applications in different fields, including medical imaging and preprocessing for computer vision. This paper analysis various medical image using different wavelet transform. Particularly the discrete wavelet transform (DWT) is best suited for De-noising of medical image. To apply two dimensional DWT is applied to the image and the four different sub filters section are obtained. Each section has some threshold value based on the noise effect. The inverse DWT (IDWT) is applied and de-noises effect estimated. To apply various soft threshold techniques like, Visu Shrink, Sureshrink, Bayes Shrink, etc., are applied and results rare compared with state of art techniques. The physical parameters like, RMSE, MSE, PSNR, SNR etc.are compared.

Keywords: -- MRI, DWT, IDWT, and MSE

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ABSTRACT

Conventional concrete used for structural applications has density in range of (2200-2600 kg/m3)[1]. A need arises for reducing the concrete density and making the concrete lighter which will in turn reduce the dead load on structure. Reduction of density in concrete leads to Light weight concrete (LWC) with its density ranging from 300 to 1850 kg/m3 [1]. The current paper makes an attempt to understand the studies carried out in the area of properties related to LWC. ACI [2][3][4], European [5][6] and Indian codes [7] are further studied to understand the guidelines mentioned in the codes related to LWC.

Keywords: — Light weight concrete, density, Codes

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Derivation of Wind Information from the Radar data using Signal Processing Techniques

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ABSTRACT

The Indian MST Radar (Mesosphere – Stratosphere –Troposphere Radar)-at National Atmospheric Research Laboratory, Gadanki-is high power VHF phased array radar operating at 53MHz in coherent backscatter mode with peak power aperture product of 3x1010 Wm2.The MST radar is a pulsed Doppler radar to support the atmospheric research in the MST regions.

The algorithm deals in extracting information like Power, Doppler, Doppler width, SNR (signal–to–noise ratio), Noise, oments, wind velocity & wind direction from MST radar data using signal processing techniques. This algorithm is developed using Visual Studio 2015 with C# and is tested on the MST radar data. The results were plotted graphically.

Keywords:—Doppler Width, Fast Fourier Transform, mesosphere-stratosphere-troposphere (MST) radar, Power Spectrum, Wind velocity.

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Detection of Malicious Packet Dropping Attacks in Wireless Ad Hoc Networks Using Enhanced HLA Scheme

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ABSTRACT

In ad hoc networks and multi-hop wireless networks, packet dropping because of malicious nodes is the major cause of packet loss. To determine whether the losses are caused at the intermediate nodes or at the source and destination itself, a scheme has to be adopted

where every node should be checked properly. By using packet loss patterns and with the help of proposed algorithm, the packet dropping nodes can be truthfully detected in a wireless ad hoc environment. The existing system adopted an algorithm which finds packet drops made by insider that are important to the network. Even though the packet drops may be caused by malicious dropping as well as by normal channel losses, the phenomenon which is exhibited has two different correlation structures. The correlations in between the lost packets positions are calculated to find out the detection accuracy. A homomorphism linear authenticator based public auditing architecture allows the auditor to check the correctness of the information given by the packets. A packet block based algorithm is also adopted to achieve the detection accuracy for the sensors with lower computational complexities. Though the system is collusion proof and gives overheads that are large, it is limited to static wireless ad hoc networks. The drawback is that the existing system assumed that source and destination are not malicious in following the protocol. The proposed system modifies the algorithms used in the existing system and detects the malicious routing attacks in ad hoc network. High detection accuracy is achieved by using enhanced HLA scheme where signatures are generated for each node in the route. The advantage of the proposed system is that even the misbehaving source and destination will also be considered in the new system.

Keywords: -- Source, HLA scheme, Authentication, Security

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Fog Computing: Security, Issues and Its Challenges

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ABSTRACT

Fog computing is an exemplification that extends cloud computing, also known as the Edge computing which works on the edge of the cloud. It provides data storage, fast data service, application services and more security in the cloud environment to the users. It overcome all the flaws of the cloud computing. Fog computing is brain behind the IoT. As compare to cloud, more network equipments are connected to computer and data centers in the

Fog computing. In this paper, it describes briefly about Fog computing and analyses in-depth wise about the security, issues and its challenges.

Keywords: -- Fog Computing, Internet of Things (IoT), cloud computing

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How India Can Achieve the Target of 40% Energy by Renewable Energy Sources by 2030

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ABSTRACT

The paper deals with the potentially tapped and untapped potential of Renewable sources or non-fossil fuels sources in India which can help India to achieve Agenda- 2030, I.e Achieving 40% of its total energy consumption demands by non fossil fuel sources.

***Keywords:* --** Solar Energy, Geothermal Energy, India, Hydro-electricity, Urban Infrastructure, Real Estate, Renewable Energy

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Integrated Cloud Sharing

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ABSTRACT

Integrated cloud sharing is a double edged sword from the privacy and security stand points. Despite its potential to provide a low cost security, organizations may increase risks by storing sensitive data in the cloud. In this paper, we analyze how the cloud's characteristics such as newness, nature of the architecture, and attractiveness and vulnerability as a cyber crime target are tightly linked to privacy and security. We also investigate how the contexts provided by formal and informal institutions affect privacy and security issues in the cloud [1]

Keywords: -- Privacy and security, integrated cloud sharing, formal institutions, informal institutions, security costs.

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Low Power and High performance JK Flip flop using 45 nm Technology

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ABSTRACT

In current scenario, VLSI circuit's greatest challenges are to reduce the power dissipation and surface area so that longer life and high performance achieved to greater extent. The key parameter is threshold voltage to reduce the leakage power. In our proposal, we design low power and high performance JK flip-flop. JK flip-flop is designed with the help of D flip-flop and with some logic gates. The proposed work is mainly of double gate MOSFET (DG MOSFET) concept and transistor stacking method is used to reduce power dissipation and delay. This circuit is examined some parameter like power dissipation, delay and power delay product (PDP).Some Simulation like Tanner EDA tool and a 45 nm technology shows that the proposed JK flip-flop has lower power dissipation and small delay comparable to those of published an explicit-pulsed double-edge triggered JK flip-flop (EP-DET-JKFF). In this circuit we observe the power dissipation decreases 21.87%. An improvement of 46.24% in PDP in JK flip-flop as compared to explicit-pulsed double edge triggered JK flip-flop.

*Keywords:—*JK Flip flop, MOSFET, Edge triggered Flip flop Transistor Stacking

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A Novel Three Phase Dual-Input Dual-Output Indirect Matrix Converter by Model Predictive Controller

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ABSTRACT

This paper presents a novel Matrix converter two AC input and two ac outputs. The presented topology is based on the traditional indirect matrix converter (IMC) but with its rear and front end six switch converter is replaced by a compact nine switch rectifier, inverter with only three extra switches added. The proposed converter can produce two sets of three phase ac outputs. This Indirect matrix converter topology can independently supply ac power from two different three phase ac power sources. A model predictive control (MPC) uses the discrete time model of the converter and load parameters are used to predict the behavior of the input reactive power on the supply side and the output currents for each valid switching state the control method selects the best commutation state. The control action which minimizes the cost function is selected and applied to the system for the next time interval. This paper presents a finite control set of model predictive control strategy for a dual input- dual output indirect matrix converter.

Keywords: — Matrix converter nine-switch converter, dual input sources, dual output loads, Model predictive controller

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Optimal Solution for Fragment Allocation in Distributed Database

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ABSTRACT

The distributed data processing is an upstanding way to improve reliability, availability and pursuance of a database system. In this paper we will concentrate on data allocation problem with the aim to persuade an optimal distribution of data in the process of the distributed database architecture in interconnection with data fragmentation. Efficient allocation of fragments requires a proportion between costs, performance and data distribution restrictions. The allocation of fragments is closely related to the replication of data from distributed databases. In addition, we analyzed the cost of fragmentation and replication.

Keywords: -- distributed databases, fragmentation architecture, allocation architecture, strategies, methods, cost analysis.

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Strengthening the Proof of Retrievability with Secure Public Auditing in Cloud Computing

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ABSTRACT

Cloud computing provides resources sharing and to handling applications on internet without having local or personal devices. This paper strength the Proof of Retrievability model (PoR) of dynamic data integrity verification on distrusted and outsourced storages on cloud computing. The Outsourced Proof of Retrievability (OPoR) system focuses on cloud storage server for prevention of retune attacks and malicious operations of servers. In Public verifiability the security monitoring is taken by cloud audit server for reducing over head on clients. There is also need to strengthen the secure process of cloud audit server (CAS). This can be provided by generating unique temporary key for each update or modification of file from user. The reset attacks of CAS and cloud storage server (CSS) secure by unique temporary key and deleting the local host replica after verifying the uploaded proof tags of CAS and CSS. And reduce the cost of memory and process time using Elliptic curve cryptography The proposed system strengthening the proof of retrievability (SPoR) model will toughen the resistant of retrievability on upload and update of file operations on cloud computing.

Keywords: — cloud audit server, cloud computing, cloud storage server, integrity, proof of retrievability.

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Ensemble Prototype Vector Machines based on Semi Supervised Classifiers

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ABSTRACT

In large number of real world applications the possibility of constituent volumes of unlabeled data is enormous. Moreover, the availability of labeled data is inadequate because of the expensive and annoying human interventions. The semi-supervised learning is a substitute of supervised learning model utilizes the small amount of labeled data for training the massive volumes of unlabeled collections is an adequate model FOE enhancing the learners' pursuance. In order to this Kai Zhang et al proposed a model that attempted to improve the Graph-Based Semi supervised Learning via Prototype Vector Machines. It uses scanty prototypes which are derived from data. Moreover, this mechanism will work effectively only on limited data samples. But, prediction of new data label from training data is more complex. The motivation gained from this model, an ensemble prototype vector machine for scaling classification performance that aimed to reduce the time and memory complexities of the kernel learning are used .The ensemble prototype vectors can handle large data sets without any complexity and for producing the new samples predictive analysis classification is performed on trained data. In predictive analysis, the decision trees are built on the training data for producing the new labels without any repeated factors. This ensemble model should achieve satisfactory classification performance.

Keywords: -- Semi-Supervised models, ensemble prototype vectors, Graph-based models, large data sets, predictive analysis.

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Single- And Multi Level Inverter-Based Renewable Energy Sources For Mitigation of Grid Faults

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ABSTRACT

Grid-connected distributed generation sources interfaced with voltage source inverters (VSIs) need to be disconnected from the grid under: 1) excessive dc-link voltage; 2) excessive

ac currents; and 3) loss of grid-voltage synchronization. In this paper, the control of single- and two-stage grid-connected VSIs in photovoltaic (PV) power plants is developed to address the issue of inverter disconnecting under various grid faults. Inverter control incorporates reactive power support in the case of voltage sags based on the grid codes' (GCs) requirements to ride-through the faults and support the grid voltages. A case study of a 1-MW system simulated in MATLAB/Simulink software is used to illustrate the proposed control. Problems that may occur during grid faults along with associated remedies are discussed. The results presented illustrate the capability of the system to ride-through different types of grid faults.

Keywords:—DC–DC converter, fault-ride-through, photovoltaic (PV) systems, power system faults, reactive power support

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Design and Development of Bi-Phase Coded RF Signal Generator for Atmospheric Radars

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ABSTRACT

The aim of the present work is to design and develop an RF Exciter in the VHF band frequency. The exciter provides pulse modulated Bi-phase coded RF signal at 53 MHz frequency. And it generates highly coherent Receiver local oscillator signal, as well as required auxiliary clock signal for synchronizing operations of all the sub-systems of the radar. The spectral performance of the 53MHz RF signal is achieved via use of quartz crystals in the Master Oscillator, and a variety of recently developed circuit technologies and frequency synthesis techniques.

Keywords: - OCXO, PLO, Bi-Phase Coder, Amplifier, T/R Switch

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"Advanced Combinatorial Interaction Testing System by Increasing Efficiency and Producing More Deterministic Results"

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ABSTRACT

Combinatorial Interaction Testing (CIT) is a black-box testing technique which tests the software with all required combinations to detect faults. The importance of CIT is to reduce the software testing cost and increasing the effectiveness. In the existing literature, there are primarily two tools they are Covering Arrays by Simulated Annealing (CASA) and Advanced Combinatorial Interaction Testing System (ACTS). Among them, ACTS is used to build the t-way test sets. It maintains the generation of a test set where't' value ranging from 1 to 6 which allows the user to identify constraints and must be satisfied to be legal. It is used to generate covering array faster in which constraints play an important role to increase the efficiency. Constraints are limitations which should be satisfied by a set. By this it is easy to find a test suite which increases the fault detection rates. The drawback here is if constraints are increased, then it is difficult to apply Combinatorial Testing which is not efficient. So, in the proposed work to overcome this drawback and to increase the efficiency certain invalid combinations should be removed from the test set. Therefore, the efficiency is increased by decreasing the number of constraints.

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Web Personalization Using the Efficient Fuzzy Cluster Based Multi Objective Social Spider Algorithm

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ABSTRACT

Big data is a fast growing technology in addition to the initial stage of development in big data. Two different kinds of computing areas we have batch computing and stream computing. But it should not satisfying all the aspects like energy efficiency, resource allocation time, and there is no proper scheduling algorithm for faster resource allocation in this paper, especially we discuss with a comparative study of energy bargain techniques has been made in the big data environment which comprises two computing areas like Batch Computing and stream computing. In this context, a special attention has been made to focus on techniques which achieve higher energy efficiency and lower response time. And we provide mathematical relations to evaluating the performance time of a task, and energy efficiency In Existing scenario, Suitable methods will be proposed sort out the issues associated with Big Data Environment. In this paper applying controls and resource scheduling techniques for Big Data platforms to improve performance.

Keywords: — Big Data, Batch Computing, Energy efficiency, Stream Computing, Response Time, Resource Scheduling

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IOT based Smart Campus

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ABSTRACT

The word smart itself represents intelligence. The paper is based on the technological improvements to a campus using Internet of Things (IOT). Use of this technology is necessary to develop an institution. In this work, the four new methods of technology are explained. They are attendance monitoring system, automatic electricity consumption reduction system, campus monitoring system and floor cleaning. All these things are realized using IOT, PIR sensor, cloud storage, Arduino Mega Microcontroller.

Keywords: -- Internet of Things (IOT), Attendance monitoring, electricity consumption, floor cleaning, PIR sensor, cloud storage, Arduino Mega Microcontroller.

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Smart Digital Inverter

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ABSTRACT

In present days, power consumption is increasing than power production and there will be regular power interruption from the suppliers due to lack of availability of power. Hence, use of inverters is inevitable. There are plenty of inverters that are available in the market from many manufacturers. All the inverters have limited control indicators within it. This paper explains the need of digital inverters which displays the details like Battery backup time, actual time, Voltage level in percentage and deep sleep mode indicator. As the population of India is drastically increasing, simultaneously the electronic technology is tremendously upgrading which expects more power supply. Due to lack of power sources/ power plant, one has to make use of the power effectively. The smart inverter discussed in this paper also monitors the power consumed in a day automatically and informs the owner with the help of Internet of Things (IOT). Actuator and Sensors reading are processed and driven by Arduino Mega 2560 Microcontroller used in the smart inverter.

Keywords: -- Digital Inverter, Internet of Things (IOT), cloud storage, Real Time Clock (RTC), Arduino Mega Microcontroller.

Leveraging Innovation for Smart Agricultural Field

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ABSTRACT

Indian culture is agriculture and is the backbone of more than 60 percent people of India, who are highly dependent on monsoon. Drastic increase in India's population will lead to food and animal feed problem in next 20 to 30 years. Food is the basic need for the survival of one's life. The main objective of this paper is to provide a smart technique to create interest in the farmers to grow crops and to increase the yield by incorporating several smart techniques and the data is uploaded to cloud and the necessary actions are taken dynamically by the controller without the intervention of the farmer with the help of Internet of Things (IOT). Sensors and Actuator reading are processed and driven by Arduino Mega Microcontroller.

Keywords: -- Smart field, Internet of Things (IOT), Moisture sensor, cloud storage, Irrigation, Arduino Mega Microcontroller.

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Automated Irrigation System Using Mean Shift Based Segmentation

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ABSTRACT

An Automated Irrigation sensor is designed for the facilitation of farmers with the help of android Smartphone application and wireless sensor network. The sensor uses a smartphone to capture the images of the soil and analyze the images using mean shift based segmentation

algorithm and supply water to the crops nearby. The sensor is activated using an application from another Smartphone. The sensor is powered by rechargeable batteries, charged by a photovoltaic panel.

Keywords: Wireless Sensor, Smartphone, Mean Shift based Segmentation

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A Switch Wed Capacitor based Multilevel Inverter using Stepped Waveform Technique

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ABSTRACT

It is pretty preferable to adapt high frequency (HF) transmission rather than low frequency AC power distribution systems (PDS).Because HF inverter acts as source side in HFAC PDS. A new switched capacitor (SC) based multilevel inverter (MLI) is proposed in this paper which is designed by SC at frontend and H-Bridge backend. SC is connected in series and in parallel to increase the number of voltage levels. With increase in number of voltage levels total harmonic distortion (THD) can be reduced. A stepped waveform method is proposed in this paper to determine the switching angles. The circuit topology, stepped waveform technique, operation, Fourier analysis, parameter determination and topology enhancement are examined. An experimental prototype with output frequency of 25 kHz is implemented to compare the results.

Keywords:—Cascaded H-Bridge, high frequency (HFAC), multilevel inverter, switched capacitor, stepped waveform technique.

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Random Forest algorithm is a best classifier measure based on Accuracy and error rate using weka tool

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ABSTRACT

Random Forest algorithm is an one of the most assemble method for Classification analysis. Classification is a supervised learning approach, which maps a data items into predefined classes. There is various classification algorithms proposed in the literature. In this paper authors have used four classification algorithms such as J48, Random Forest (RF), Reduce Error Pruning (REP) and Logistic Model Tree (LMT) to classify the "CAR SALES NOMINAL" open source Data Set. Waikato Environment for Knowledge Analysis (WEKA) has been used in this paper for the experimental result and they found that Random Forest algorithm classify the given data set, it shows better results than the other algorithms for this specific data set. In this paper, the performance of classifier algorithms is evaluated for 5 fold cross validation test. Finally, Random Forest Algorithm has been proved as a benchmark classification method for getting maximum accuracy value and minimum error rate value.

Keywords:--Decision Tree, J48, Random Forest, REP, LMT, Classification, Cross-Validation, Supervised Learning and Performance Measure.

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Effective Market Analysis Using a Priori Algorithm

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ABSTRACT

Association rule mining identifies the remarkable association or relationship between a large set of data items. With huge quantity of data constantly being obtained and stored in databases, several industries are becoming concerned in mining association rules from their databases. For example, the detection of interesting association relationships between large quantities of business transaction data can assist in catalog design, cross-marketing, loss leader analysis, and various business decision making processes. A typical example of association rule mining is market basket analysis. This method examines customer buying patterns by identifying associations among various items that customers place in their shopping baskets. The identification of such associations can assist retailers expand marketing strategies by gaining insight into which items are frequently purchased jointly by customers. It is helpful to examine the customer purchasing behavior and assists in increasing the sales and conserve inventory by focusing on the point of sale transaction data. This work acts as a broad area for the researchers to develop a better data mining algorithm. This paper presents a survey about the existing data mining algorithm for market basket analysis.

Keywords: -- Association Rule Mining, a Priori Algorithm, Market Basket Analysis

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Improving Performance of Delay Constraint Scheduling Protocols for Wireless Sensor Network

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ABSTRACT

In Wireless Sensor Network delay and energy are important constraints. It is observed that delay, packet delivery ratio, energy, rate transmission issues are generated when a packet is sent from sources to destination. This paper deals with issues of delay and energy. Additionally, it works on a Route selection criterion which is based on minimum node delay and energy consumption. When congestion occurs in a path then data transmission rate at MAC layer is reduced using 802.11. The simulation results prove that proposed protocol is more efficient than existing protocol under the end to end delay.

Keywords:—Wireless sensor Network, data rate, scheduling, delay, energy

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Dynamic Facsimile Recognition in Scalable Databases

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ABSTRACT

In these days the facsimile in the database bothers a lot. It is quite waste of time and waste of memory issue. There were many approaches previously which detect these facsimiles. The proposed approach is the Facsimile recognition in which we are going to identify various representations of single objects i.e. facsimiles. Now days the problem became bigger making requirement for the identification methods those on huge datasets in optimum time by preserving the originality of a dataset which gets to be progressively

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Compensation of Utility Current by PV-APF and Fuzzy Logic Controller Combination

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ABSTRACT

This paper has proposed a novel method for the improvement of power quality (PQ) in a nonlinear system using active power filter (APF). The proposed topic incorporates Photovoltaic (PV) system, MPPT controller, fuzzy controller, dc link capacitor, voltage source converter (VSC) and non linear load. The switching gate pulses for the APF are generated by fuzzy logic controller (FLC) technique depending on instantaneous power balance theory. By this technique total harmonic distortion (THD) in the utility current can be minimized within IEEE norms. The advantage of FLC is faster response, better efficiency, no need for accurate mathematical models, capable of dealing with imprecise inputs and managing with non linearity's. In this paper 3- phase 3-wire system under unbalanced and balanced load conditions with APF and FLC is implemented. MATLAB / SIMULINK is used to demonstrate the system and a comparison of THD values at certain load conditions is presented.

Keywords: - Photovoltaic (PV), Incremental Conductance MPPT method, Instantaneous Power balance Theory, Active Power Filter, fuzzy logic controller.

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5 D Optical Storage Devices: Superman Of All Storages

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ABSTRACT

Storage of data is very essential for the continuity of human race. Storage devices like pen drives, hard discs or even the internal storage offered in our mobile phones are not enough

for storage of special types of data which may include microscopy, digital images and all sorts of computing data. Moreover, we face problems like crashing of the hard disc, pen drives etc untimely. It is sometimes difficult to retrieve those vital data. Hence, we need to device a storage medium that can be used to read, write, store and erase data including those of medical imaging and microsurgery. At this juncture, nanotechnology comes into the foreplay, which has successfully recorded, read, and erased data from a piece of nano-structured glass. This technique could revolutionize microscopy in general and medical imaging in specific — and, perhaps more importantly for computing, it could also be used to store binary data, like an optical disc. Unlike DVDs or Blue-rays, which seem to be capable of storing data for an unlimited period of time without a reduction in data integrity, the 5D optical storage could allow for densities as high as 360 terabytes per disc, and unless it is crushed in a vice, these discs are so non-volatile that data stored on them should survive the human race. However the implementation of digital data storage, which is a crucial step towards the real world applications, has not been demonstrated by ultrafast laser writing. Here, a digital copy of the text file in 5D using polarization controlled self assembled ultrafast laser nanostructuring in silica glass has been successfully recorded and retrieved.

Keywords: — imaging, microsurgery, nanotechnology, laser, terabytes, polarization

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E-Ball Technology

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ABSTRACT

A new concept of pc is coming now that is E-Ball Concept pc. The E-Ball concept pc is a sphere shaped computer which is the smallest design among all the laptops and desktops. This computer has all the feature like a traditional computer, elements like keyboard or mouse., dvd, large screen display. E Ball is designed that pc is be placed on two stands, opens by pressing and holding the two buttons located on each side of the E-Ball pc, this pc is the latest

concept technology. The E-Ball is a sphere shaped computer concept which is the smallest design among all the laptops and desktops have ever made. This PC concept features all the traditional elements like mouse, keyboard, large screen display, DVD recorder, etc, all in an innovative manner. E-Ball is designed to be placed on two stands, opens by simultaneously pressing and holding the two buttons located on each side. After opening the stand and turning ON the PC, pressing the detaching mouse button will allow you to detach the optical mouse from the PC body. This concept features a laser keyboard that can be activated by pressing the particular button. E-Ball is very small, it is having only 6 inch diameter sphere. It is having 120×120mm motherboard.

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NPIT Approach for Bypassing the Exact Location of IP Spoofers Using Path Backscatter Messages

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ABSTRACT

It is long known attackers may just utilize original supply IP area to duvet their actual areas. To seize the spoofers, more than a few IP trace back mechanisms were proposed.

However, due to the challenges involving deployment services, there was now not any largely adopted IP trace back solution, as a minimum at the internet level. Therefore, the mist on the places of spoofers has in no way been dissolute till now. This paper proposes passive IP trace back (PIT) that bypasses the deployment difficulties of IP trace back systems and comes up with a option to the obstacle. PIT investigates Internet Control Message Protocol (ICMP) error messages (named path backscatter) prompted with the aid of spoofing site visitors, and tracks the spoofers centered on public to be had expertise akin to topology. Alongside these lines, PIT can discover the spoofers and not using a association necessity. This paper represents the explanations, accumulation, and the factual results on means backscatter, exhibits the tactics and adequacy of PIT, and demonstrates the caught areas of spoofers by way of making use of PIT on the way in which backscatter expertise set. This outcome can support additional expose IP spoofing, which has been studied for lengthy however in no way good understood. As given that of some boundaries PIT cannot work in all the spoofing assaults, it could be a invaluable mechanism of tracing a spoofers before an internet-degree trace back system has been deployed in actual..

Keywords:- Computer network management, computer network security, denial of service (DoS), IP trace back

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Implementation of Individual Pitch Control of DFIG Based Variable Speed wind turbines Using Fuzzy Logic for Reduction Flickers

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ABSTRACT

Due to the wind speed variation, wind shear and tower shadow effects, grid connected wind turbines are the sources of power fluctuations which may produce flicker during continuous operation. This paper presents a model of an MW-level variable-speed wind turbine

with a doubly fed induction generator to investi-gate the flicker emission and mitigation issues. An individual pitch control (IPC) strategy is proposed to reduce the flicker emission at different wind speed conditions and also extend, an advanced pitch angle control strategy based on the fuzzy logic is proposed for the variable-speed wind turbine systems. The fuzzy logic controller is employed for change blade angle of wind turbine and constant power can be achieve. The block diagram of proposed pitch control which consists of pitch controller, actuator model and turbine linearized modeled by using Matlab/Simulink software.

Keywords:-Flicker, flicker mitigation, individual pitch control (IPC), variable speed wind turbine, fuzzy logic.

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Behavior under Axial Load for Concrete Filled Steel Tubes

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ABSTRACT

The concrete filled steel tubes are used very less due to lack of knowledge and less availability of proper codes.

In this study attempt has been made to study the behavior of concrete filled steel tubes under axial load. Type of concrete used here is self-compacting concrete which is prepared using proper directions from EFNARRC guidelines. After the experimental work done the obtained results are later compared with the theoretical results obtained by international codes i.e, EC4, ACI-318-1999,ASCI-2005.

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Name Plate Recognition for Real Time Application

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ABSTRACT

The era of automation brings comfort and ease in the life style. The security, safety and information management issues are the most vulnerable issues which need to be resolved at every possible level. The traffic monitoring is one of the important issues in this world of growing population and vehicle density. It is very essential to monitor, record the traffic movement for smooth management. The manual ways to keep on watching is impossible due to exponential growth in the number of vehicles running on the road all the time. Obviously the security, monitoring of vehicles &name plate reading auto mutation becomes necessary for vehicle management system this ensures continuous reading, recording of vehicle & person details. In this paper, we present the analysis of various techniques used in name plate recognition system and presents a real time algorithm of name plate reading system that promises better and accurate results.

Keywords:- Template Matching, Morphological, Segmentation, Real Time

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Big Data in Educational Data Mining and Learning Analytics

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ABSTRACT

Educational data mining and learning analytics are used to research and build models in several areas that can influence learning systems. Higher education institutions are beginning to use analytics for improving the services they provide and for increasing student grades and retention. With analytics and data mining experiments in education starting to proliferate, sorting out fact from fiction and identifying research possibilities and practical applications are not easy. This issue brief is intended to help policymakers and administrators understand how analytics and data mining have been—and can be—applied for educational improvement. At present, educational data mining tends to focus on developing new tools for discovering patterns in data. These patterns are generally about the micro concepts involved in learning, learning analytics.

Keywords: -- Data mining, big data, and Educational data mining, learning, learning analytics

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Eye Gaze Detection Technique to Interact With Computer

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ABSTRACT

In this world of technology everything is being computerized. But there are many people with several disabilities like handicapped people who are unable to take advantage of this technology. The system proposed an efficient approach to handle the computer. The built system software uses the webcam to control the cursor. As the webcam is easily available and most of the new system comes with built in webcams so it will be very beneficial and cost effective. This system is based on eye tracking, at first uses face detection and from that it extracts all image features. From extracted image features it uses pupil to control the cursor of mouse.

Keywords: — Face Capturing, Image Extraction, Harris Corner Detector, Contours, Cursor Controlling.

A Location Tracking System Using Location Prediction and Dynamic Threshold

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ABSTRACT

In this paper, a real time location tracking system is developed based on GPS with foremost two techniques LBD and Dynamic threshold. Location based delivery (LBD) is used to track the moving speed of the target.LBD consists of dynamic threshold, SMS and GPS. Dynamic Threshold values can be adjusted according to the moving speed of the target. The automatic SMS is generated when the target exceeds the threshold value and sent to the target with absolute speed and accurate location .It reduces the number of short messages.SMS delivery is based on the latitude and longitude of the target location. Here the latitude and longitude are calculated using GPS. It mainly overcomes the limitations in previous time based delivery system. This paper presents a tracking Techniques application for android mobile phone users.

Keywords: — Global positioning system (GPS), location tracking, prediction algorithms, and short message service (SMS), Dynamic threshold and Location based Delivery (LBD).

Modelling Of PV Cells Using Matlab/Simulink

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ABSTRACT

Energy is the prime mover of economic growth and is vital to the sustenance of a modern economy. One of the major concerns in the power sector is the day-to-day increasing power demand but the unavailability of enough resources to meet the power demand using the covenantal energy sources. Renewable sources like wind energy and solar energy are the prime energy sources which are being u_lized in this regard. The cernuous use of fossil fuels has caused the fossil fuel deposit to be reduced and has drascally affected the environment depleing the biosphere and cumulavely adding to global warming. Solar energy is abundantly available that has made it possible to harvest it and utilize it properly.

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Performance Analysis of Least Mean Square and Recursive Least Square Channel Estimation Techniques under Multipath Fading Environmental Conditions

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ABSTRACT

In practical scenario the transmission of signal or data from source to destination is very challenging. As there is alot of surrounding environmental changes which influence the transmitted signal. The ISI, multipath will corrupt the data and this data appears at the receiver or destination. Due to this time varying multipath fading we use different channel estimation filter at the receiver to improve the performance. Here we are estimating the different channel estimation techniques under different channel conditions. The two algorithms we used here are LMS and RLS for AWGN and Rayleigh channels under MATLAB platform.

Keywords:— LMS (Least Mean Square), RLS (Recursive Least-Squares), AWGN (Additive White Gaussian Noise), Rayleigh Fading Channel

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Comparision of QoS Parametrs for DSDV and DSR in Hybrid Scenario

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ABSTRACT

Mobile Multi-hop Ad Hoc Networks are collections of mobile nodes connected together over a wireless medium. These nodes can freely and dynamically self-organize into arbitrary and temporary, "ad-hoc" network topologies, allowing people and devices to seamlessly internetwork in areas with no pre-existing communication infrastructure. It is, however, possible to combine an infrastructure-less ad hoc network with a fixed one to form a hybrid network which can cover a wider area with the advantage of having less fixed infrastructure. Due to the hybrid nature of these networks, routing is considered a challenging task. Several routing protocols have been proposed and tested under various traffic conditions.

However, the simulations of such routing protocols usually do not consider the hybrid network scenario. In this work we have carried out a systematic simulation based performance analysis of the two prominent routing protocols: Destination Sequenced Distance Vector Routing (DSDV) and Dynamic Source Routing (DSR) protocols in the hybrid networking environment using NS2. The performance of the DSDV is better than the performance of the DSR routing protocol. To compare the performance of DSDV and DSR routing protocol, the simulation results were analyzed by graphical manner and trace file based on Quality of Service (QOS) metrics: such as, packet delivery fraction, average end-to-end delay and normalized routing load under varying pause time with different number of sources.

Keywords:— DSDV, DSR, MANET, QoS, Network Simulator-2 (NS-2)

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Mitigation of Power Quality Issues Using Single Stage and Multi Stage Converters

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ABSTRACT

This paper presents a novel topology of power electronic transformer. In the design process, the AC/DC, DC/AC, AC/AC converters and high frequency transformer have been used. One matrix converter operates as AC/AC converter in power electronic transformer. The proposed power electronic transformer performs typical functions and has advantages such as power factor correction, voltage sag and swell elimination, voltage flicker reduction and protection capability in fault situations. Power quality improvement with proposed power electronic transformer has been verified by the simulation results.

Keywords:-Power quality; Voltage sag and swell; Power electronic transformer; AC/AC converter

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Contrast Enhancement of Satellite Images Using Dual- Tree Complex Wavelet Transforms Technique

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ABSTRACT

This paper forwards enhancement of satellite picture using Discrete Time Complex Wavelet Transform Technique. The discrete-wavelet-transform-based (DWT) contrast image scheme generates artifacts (due to a DWT shift-variant property). A wavelet-domain approach based on dual-tree complex wavelet transform (DT-CWT) proposed for contrast of the satellite images. A satellite input image is decomposed by DT-CWT (which is nearly shift invariant) to obtain high-frequency subbands. The high-frequency subbands and the low-resolution (LR) input im-age are interpolated using the Lanczos interpolator. The high-frequency subbands are passed through an NLM filter to cater for the artifacts generated by DT-CWT (despite of its nearly shift invariance). The filtered high-frequency subbands and the LR input image are combined using inverse DT-CWT to obtain a resolution-enhanced image. The contrast enhancement method uses the analysis of excellent glaze levels and appropriate flexible radiant transfiguration which performs DWT in reducing the rate of image which is given as input, into a group of band bounded constituents by a sampling factor, called High-High, High-Low, Low-High, and Low-Low sub bands. The brightness propaganda is contained in the Low-Low sub-band where the input image with the superlative glaze level is computed. According to the

superlative glaze level the Low-Low sub band is disintegrated into trilayer. The suitable flexible radiant transfiguration is processed in the disintegrated trilayer of the sub-band using knee shift function, dominant glaze level and gamma adjustment function. For preserving the texture of contrast suitable enhanced flexible radiant transfiguration is processed. The final enhanced image is acquired by means of the use of inverse DWT. In this method, the distant sensed image is bifurcated into petite blocks, and then each block is improvised using advanced block based discrete wavelet transform. The enhanced blocks are then fused together and by using inverse DWT, the emanated image is obtained. The glaze and radiance of the satellite image will be better when compared with the image used in the Existing systems. Haar Wavelet Transform (HWT) is used for disintegrating the pictures into sub-bands. Trilateral is formed using preeminent glaze level analysis. From the preeminent glaze, each disintegrated layer there is a generation of suitable radiance transfer function.

Keywords: — Complex Wavelet Transform, Discrete wavelet transforms (DWT), preeminent glaze level analysis, and Flexible radiant transfiguration.

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Heterogeneous Documents Using Hierarchical Dirichlet Process

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ABSTRACT

The hierarchical data groupings in text corpus, e.g., words, sentences, and documents, we conduct the structural learning and infer the latent themes and topics for sentences and words from a collection of documents, respectively. The relation between themes and topics under different data groupings is explored through an unsupervised procedure without limiting the number of clusters. A tree stick-breaking process is presented to draw theme proportions for different sentences. We build a hierarchical theme and topic model, which flexibly represents the heterogeneous documents using Bayesian nonparametrics. Thematic sentences and topical words are extracted. In the experiments, the proposed method is evaluated to be effective to build semantic tree structure for sentences and the corresponding words. The superiority of using tree model for selection of expressive sentences for document summarization

Keywords:— Bayesiannonparametrics (BNPs), latent Dirichlet allocation (LDA) tree stick-breaking process (TSBP)

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An Experimental Investigation of Performance of Ethanol & Methanol Mixed Niger Based Biodiesel Blends

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ABSTRACT

The acute shortage of natural oil wells in India provides sufficient reason to investigate alternative fuel source. Fuels of bio origin such as alcohol, vegetable oils, bio mass, bio gas etc. are becoming more and more popular. Biodiesel, derived from vegetable oils, is the most promising alternative fuel to conventional diesel fuel. However the explored bio-fuels till date still failed to provide a successful replacement of conventional fuels. This fact gives a wide scope to work further on bio extracted fuels. The present thesis work also tries to contribute its share of investigation on analysis of performance variation of Biodiesel blends with Ethanol v/s Methanol. In this paper biodiesel derived from Niger Seed Oil is introduced as a substitute fuel for the conventional diesel. An experimental study was performed in order to examine the effect of methanol/ethanol additive in diesel-Niger biodiesel fuel blend, blended at various mixing ratios and the effect of this different biodiesel blends on the diesel engine performance were examined and compared to standard diesel fuel. In experiments, 5% (by volume) methanol/ethanol was blended with diesel fuel, and then 5%, 10% and 15% Niger biodiesel was added in the blend. The diesel engine used for experiment is single cylinder, four strokes Kirlosker make water cooled diesel engine. The experimental results showed that, 5% blend of Niger derived Bio Diesel and Diesel with additional 5% Methanol (Blend A) is more efficient than pure Diesel. Hence Blend 'A' (5% Methanol + 5% Niger biodiesel + 90% Diesel) is the best mixing ratio among all the other blends used for experiments.

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Heterostructured p-NiO/n-ZnO Using Nanofibers for Effective Ammonia Gas Detection

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ABSTRACT

Metal–oxide heterostructures are very important materials for developing various new kinds of toxic complex gas/chemical detection sensor systems. However, the major factors, such as sensitivity, selectivity, stability, response, and recovery times (SSS-RRT) of the sensors, still need to be optimized for practical technological potential applications. Low-dimensional materials have shown tremendous potential to solve majority of the critical issues due to their surface chemistry than that of their bulk form. In this paper, the role of nanostructure p-NiO/n-ZnO heterostructure as room temperature (RT) ammonia sensor has been investigated. Toward this paper, the electrospinning method was employed to prepare heterostructure metal–oxides blended with polyvinyl alcohol (n-ZnO/p-NiO) nanofibers. The systematic characterizations of the obtained n-ZnO/p-NiO heterostructure were performed using X-Ray diffract meter (XRD), scanning electron microscope (SEM), micro-Raman and photoluminescence spectrophotometer. Furthermore, the RT ammonia sensing characteristics were investigated.

Keywords:-- Metal Oxide Heterostructures; ZnO; NiO; Gas Sensor, NH3, Electro spinning.

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Advances In Telemedicine

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ABSTRACT

Telemedicine is becoming a fast growing technology in the medical world. It is being applied in almost every developed country in the world. It has gone as far as closing the distance between doctors and patients. Telemedicine has advanced in recent years, from a simple telephone call to more sophisticated ways of communication like video calls between patients and doctors. However, telemedicine is slowly becoming a reality in the developing and undeveloped countries. People in these countries are rarely grasping the meaning and impact of telemedicine. This study highlights on how telemedicine has been evolving throughout the years, the setbacks it has been facing in developing and undeveloped countries and how it can be accepted and appreciated in these countries.

Keywords:- Performance, Healthcare

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Study of Ground Power Unit for Helicopters

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ABSTRACT

The objective of this project is to study the need of GPU for helicopters and provide the technique to improve the voltage regulation of GPU. Voltage regulation is a measure of change in voltage magnitude between the sending and receiving end of components, such as a transmission or distribution line. The GPU is electrically driven vehicle with operator cabin, traction motor, MOSFET based speed controller and high quality traction tubular batteries. GPU is capable of providing both 3 faze 400 Hz AC power up to 25KVA and 28.5V DC power up to 250A.

There are many faults occurring in GPU which can be analyzed by protection PCB's such as engine protection PCB, fuse PCB, DC voltmeter PCB, horn PCB, DC protection PCB, flasher PCB, DC ammeter PCB etc. The frequently occurring major fault is the failure of voltage regulator which affects the electronic devices in the helicopter if there is voltage drop. Our aim is to maintain the voltage constant by the addition of components to the present circuit. By this new implementation technique we can maintain the required voltage for the proper operation of devices and for the take-off of the helicopters.

Keywords: - Printed circuit board (PCB); Voltage regulation; Voltage Drop.

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Competency Mapping in Organization from HR Perspective

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ABSTRACT

Over the past 10 years, human resource and organizational development professionals have generated a lot of interest in the notion of competencies as a key element and measure of

human performance. The current globalization of economy necessitates innovative approaches in managing the work force. The fast changes happening in the demography and social systems thereof have given breathing space for various HR practices enhancing the employee productivity and growth. And one of the most commonly used HR practice is competency mapping for development of the employees. Competencies include the collection of success factors necessary for achieving important results in a specific job or work role in a particular organization. Success factors are combinations of knowledge, skills, and attributes that are described in terms of specific behaviors, and are demonstrated by superior performers in those jobs Or work roles. Attributes include personal characteristics, traits, motives, values or ways of thinking that impact an individual's behavior.

Keywords:-- competency, knowledge, competency mapping, skills, attributes

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Employee Motivation in an Organization

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ABSTRACT

The research study provides findings on how motivation affects the effective work of employees and how employees are encouraged to maximize work motivation. The results also present which de-motivating factors are most present at work. The findings assist management staff to understand their role in motivating their employees and how much it is important that leaders themselves should be the most motivated. Employee motivation, i.e. methods for motivating employees, has been broadly defined as the psychological forces that determine the direction of a person's behaviour in an organization, a person's level of effort and a person's

level of persistence. Results show that employee motivation is very important at the workplace. Because of this, employees have to take care of a good work climate within the organization and for good interpersonal relationships with fellow employees. The objective this research paper is to understand how motivation is important and how it affects the organisation to increase the labour efficiency and how it will lead an organisation to achieve their common objectives and also individual objectives.

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New Technology of Controlling Robot Using Mobile Phone

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ABSTRACT

Recently, robot technology has gained popularity because of labour shortage, ability to work for long hours, etc. Conventionally, wireless control robots use RF circuits, which have the drawbacks of limited working range, limited frequency range and limited control. Use of a mobile phone for robotic control can overcome these limitations. It provides the advantages of robust control, working range as large as the coverage area of the service provider. Although the appearance and capabilities of robots vary vastly, all robots share the features of mechanical, movable structure under some form of control. The control of robot using mobile phone involves three distinct phases: Reception, Processing and Action. Here the reception is done by DTMF decoder unit (HT9170), processing is done by on-board microcontroller (LPC2148) and the action is performed using motors (DC gear motors). The Camera is mounted on the robot to record and capture images of remote areas. The

Robot is controlled according to the user's key press. The microcontroller is programmed in Embedded C language using Keil microvision4 compiler. Flash magic is used as a tool for user interface. The mobile control system has the ability to move in different directions such as left, right, forward, and backward and stop according to user's key press and

to capture images of remote location. Mobile phone operated control is best because there is no limitation of range.

Keywords: - DTMF decoder unit (HT9170), Microcontroller (LP2148), Motor driver (L293D) and Flash magic.

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High Data Length FPGA Based Single Cycle, 3x3 Packet Forwarding Routers for NOC (Many Applications) Applications

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ABSTRACT

Network on Chip (NoC) is a new paradigm to make the interconnections inside a System on Chip (SoC) system. In traditional solutions interconnections are realized using a bus structure. While integration increases the bus structure does not meet the needs of the new technology. Bus starts to be narrow and in the worst case it begins to block traffic. In NoC technology the bus structure is replaced with a network which is a lot similar to the Internet. Segments communicate with each other by sending packetized data over this network.

Just like a computer network, a NoC network consists of devices that use the network, routers that direct the traffic between devices and wires that connect devices to routers and routers to other routers. In the network design of the NoC the most essential things are a network topology and a routing algorithm. Routers route the packets based on the algorithm that they use. There are many kind of different algorithms for different systems to choose. Every system has its own requirements for the routing algorithm.

An FPGA based, single cycle, low latency router design that can be reconfigured to 1-D and 2-D network on chip architectures is proposed. The design is highly scalable and exploits the features provided by any standard FPGA platform and can be easily ported to any other FPGA platform. Due to the highly interconnect-centric nature of NoCs, the built-in resources of an FPGA in terms of routing channels and on chip logic are ideal and provide a well-utilized platform for the router design. Experimental results prove the proposed design is robust and cost effective.

Keywords: — Network on chip, round robin router, flow control, interconnects, FSM, FPGA, LUT, GALS.

Performance Analysis of Routing Protocols in Vehicular ADHOC Networks Scenario for TCP Applications

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ABSTRACT

Vehicular connectivity can be considered as the coming generations' killer application. The vehicle-to-vehicle connectivity is immense for the improvement of Intelligent Transportation System (ITS) in order to provide a wide spectrum of applications, including safety-related, traffic control, and entertainment. Some important characteristics that distinguish vehicular ad hoc networks (VANETs) from mobile ad hoc networks are highly dynamic topology and fast movement of nodes. Hence, the protocols designed for mobile ad hoc networks (MANETs) cannot be simply adopted in vehicular ad hoc networks (VANETs). In this paper simulation based experiments have been performed to analyze the performance of Destination Sequenced Distance Vector (DSDV), Optimal Link State Routing (OLSR) and Adhoc On Demand Distance Vector (AODV) routing protocols on the basis of Packet Delivery Ratio, End to End delay and Average Throughput for TCP applications by Network Simulator (NS-3.19) using mobility model generated through Simulation of Urban Mobility (SUMO) tool. The results are compared by varying number of nodes. The analysis shows that OLSR routing protocol outperforms the other routing protocols AODV and DSDV and best to be used in vehicular ad hoc network for TCP applications.

Keywords:— VANETs, NS-3.19, SUMO, AODV, DSDV, OLSR, TCP

Face Detection on Open CV using Raspberry Pi

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ABSTRACT

This paper describes a machine learning approach for face detection to achieve extremely rapid and high detection rates. The objectives of the face detection are to detect faces and its spatial location in any images or videos. The proposed system detects the faces present in a grey scale image. The entire implementation includes three main stages. In the initial stage, "Integral Image" representation is used to extract the rectangular features very quickly. The intermediate stage includes AdaBoost learning algorithm to train classifiers and it also selects small number of visual features from a large number of features to yield extremely efficient classifiers. Finally all classifiers are linearly cascaded in such a way that the initial classifiers in the cascade consists of less complex features and more complex features are added as cascading increases in order to reject non-face region very quickly and focus on the face target which will result in less computation time. The classifiers are trained using OpenCV train cascade utility and a strong classifier is obtained after training with a large set of positive (faces) and negative (non-faces) images. The trained face detector is tested on Raspberry Pi (model B+) with its five mega pixels camera. An experimental result shows that the proposed system achieves good face detection rate compared to conventional methods.

Keywords:- Face detection, Rectangular Features, Integral image, AdaBoost, OpenCV.

A Review on; Green Nanotechnology; a Wonderful Tool for Herbal Industry

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ABSTRACT

Herbal medicines are in great demand which stand for a major share of the pharmaceutical market in the developing world, due to the better compatibility and minimal side effects. Herbal medicines are integral part of the development of modern evolution they have the potential to treat the most of the diseases. The current phase global challenges including the over dependent on natural source and over exploitation of natural resources lead to biggest environmental challenges. Green synthesis of nanoparticles provides the solution to environmental challenges produce the nanomaterials without unduly impacting the human health or environment. Green nanotechnology is the wonderful tools for herbal industry due to their advantages. The nanoparticles produced from green methods are more stable, uniform in size, rapid eco-friendly and easily scaled-up. The herbal coated nanoparticles have found to be more pharmacologically active due to the attachment of several pharmacologically residues. The review paper mainly focus on the production of metal nanoparticles of Gold, Silver and Magnetite Nanoparticles by plant extracts were demonstrated with brief procedures. Characterization of the synthesized nanoparticles performed through the technologies through UV spectroscopy, X-Ray Diffraction analysis, TEM, SEM, FTIR analysis. Among all Nano particles Magnetite Nanoparticles (MNPs) are more focused due to their low cost, unique physical, chemical structures. MNPs their potential benefits can be used as multifunctional nanoparticles in biomedical applications. MNPs are shown significant the inimitable phenomenon like magnetic catalyst, microwave absorption, super magnetism, high field irreversibility and high saturated field. The objective of this review summarize role of green nanotechnology for the production of smart herbal drugs.

Keywords:- Herbal Industry, Green Nanotechnology, Magnetite Nanoparticles and Herbal drugs.

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A Study on Hyper spectral Data Imaging Based On Spatio – Spectral Scanning

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ABSTRACT

Hyper spectral data is one of the most significant techniques in remote sensing nowadays. It has a capability of separating the different and describing the objects of same size in detail. It processes the image in the large number, narrow and it can produced data with sufficient resolution. Hyper spectral images provide spectral information to identify and distinguish unique materials. Hyper spectral data imaging provides an accurate and detailed extraction of information for any type of remote based data. The main purpose of Hyper spectral remote sensing is to measure the various components of the Earth system that is acquired as images for scientific applications and research purpose. Hyper spectral remote sensing can be categorized the information into two ways: Feature space and Spectral space. The feature space method is not efficient because the data dimension is determined to describe the patterns. The spectral based is used for extracting anomalous pixel vector at endmember extraction. This will validate the both synthetic and real Hyper spectral data images. The spatial domain pixel preserving the scatter matrix and optimal discriminative projection is obtained by spectro-spatial scatter and maximizing a modified scatter of data.

Keywords: – Hyper spectral, Images, Spectral space, Spatio- Spectral scanning

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Mental Disorders Controlled By Medical Herbs

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ABSTRACT

India is a land familiar for its rare medical herbs even from the ancient days. Ecliptics' a plant in that category available in cultivated lands. Half kilo of Ecliptaalfaplant leaves collected and made solution by grinding. Anotherhalf Kilo of Aloe Indica leaves which are thick in size and cut into small pieces aftergrinding it to collect the solution by simple filteringmethood. Indian Goose berry is collected and made solution for the same quantity.

The three solutions are mixed in a vessel prepared by clay by adding half kilo coconut oil with a turmeric powder of 10 grams. The mixer is boiled for two hours and made to cool. The paste prepared is applied to head. It is observed that it gives positive results in reducing head ache, hysteria, tensions, sleeplessness etc.Ecliptaalpba is also used as herbal dye liver tonic to control wounds and cuts of skin.

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Detection of Rename Refactoring for Generalization using type constraints

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ABSTRACT

Software refactoring is a good means to improve software quality by restructuring the internal structure of software applications. A number of approaches and tools have been proposed to suggest where refactoring should be conducted to ease software refactoring. But, identifying such refactoring opportunities is usually difficult as it involves difficult semantics and often influenced by many factors besides source code.

An approach to identify renaming opportunities by expanding conducted rename refactoring avoids difficulties in understanding natural language and semantic analysis. The principle applied is if software is renamed, other entities that look similar should be consistently renamed. The existing approach has been evaluated on the history of open-source applications and objective and quantitative evaluation results. The advantages of identifying renaming opportunities by expanding conducted rename refactorings are that, it does not involve difficult semantic analysis of source code and less influences by subjective factors. However, there is no evaluation of how actual developers perceive the approach.

The proposed approach is likely that more than one method should be moved when system functionality is restructured. The approach of identifying renaming opportunities by expanding conducted ones help to avoid incomplete restructuring and also we can receive some feedback from real software developers on how they perceive the tool and approach.

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Seven Level Multi level Inverter Topology for Grid Interconnection

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ABSTRACT

Renewable energy sources (RES) gain an importance in recent decades because they are pollution free, easily erectable, and limitless. Among RES, Photovoltaic systems are mostly used as they are light, clean and easily installable. Normally PV cells converts sunlight into electricity in the form of dc. A suitable converter is usually needed to convert the dc power into ac power, which is then injecting into the power grid. The Multilevel Inverters [MLI] can be used to convert the dc into ac for integration of renewable energy sources into the conventional grids. But the conventional MLIs such as Diode Clamped MLIs requires extra diodes in conjunction with the active switches, Flying capacitor MLIs requires extra Capacitors and control also difficult if the levels increases and the Cascaded H-bridge MLIs requires separate

dc sources which limits its use. This paper proposes a new type of multi level Inverter which converts the dc into ac using less number of switches when compared to conventional multilevel Inverters. The proposed Inverter can be used to integrate the Photovoltaic system into Grid, with satisfying the grid requirements such as phase angle, frequency and amplitude of the Grid voltage. Seven levels and thirteen level proposed MLI is simulated using Matlab/Simulink environment and the corresponding results are presented in this paper.

Keywords:- Grid interconnection, PV system, MLI, Renewable energy sources (RES).

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Study on OBD –II Diagnostic System: Special Reference to Intelligent Transport System for Automobiles"

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ABSTRACT

OBD-II tests all sensors, actuators (valves), switches and wiring for proper connectivity and checks the inputs and outputs of each device are within allowed range of valves in automobiles. We know that sensor is consisting by three parts, i.e. Sensor; a Single Processor and a display Device etc. Single processor may converts the physical quantity such as temperature, pressure, vacuum, RPM, air flow and electrical signal etc. A Single processor performs to increase power level, reliability and accuracy. The display device converts the signal from signal processor into a readable quantity. Oxygen sensor is an electronic device used to measure the oxygen content in exhaust gases , which is known as lambda sensor and there are two types of Exhaust Gas Oxygen (EGO) sensors and both based on the use of oxides of materials.

Key Words:-- Actuators, Display device, heat exchange, Monitoring temperature, Sensors, Single processor etc.

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Heterogeneous Documents Using Hierarchical Dirichlet Process The impact of quality practices on customer Satisfaction and business results: product versus service organizations

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ABSTRACT

Research on the differences in customer satisfaction between product and service organizations has focused on an output perspective, or how customers evaluate performance. This study takes this research inside organizations to analyze and investigate how key internal quality practices of product versus service organizations (employee management, process orientation, and customer orientation) influence customer satisfaction and business results. Using a national quality survey from 482 companies in Sweden, our analysis shows that for product organizations, internal quality practices influence customer satisfaction and business results primarily through an organization's customer orientation. For service organizations, both customer and process orientation impact customers directly, and employee management has a direct impact on business results. The research also supports the claim that organizations with a quality foundation are in a better position to adopt a customer orientation.

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Design of a Low Power Low Kickback Noise Latched dynamic Comparator for Cardiac Implantable Medical Device Applications

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ABSTRACT

This brief presents a new architecture of dynamic latched regenerative comparator that suited for the cardiac Implantable Medical Device applications. In this proposed architecture, the comparator is designed to with low transistor count to reduce power dissipation. Also the proposed comparator has a positive feedback mechanism for achieving low kickback noise and high resolution. It is shown that the generated kickback noise is reduced a lot when compared with the other existing architectures. The proposed comparator is designed with an additional circuitry that provides extra shielding between the nodes of input and output to reduce the generation of kickback noise. The presented work is simulated using Mentor Graphics tools in 130nm technology. The proposed work is designed well to suit the functionality with supply voltages ranging from 450mV to 1V.

Keywords:--Cardiac Implantable Medical Device applications, low transistor count, Kickback noise, comparator

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Risk Minimization in a Power System Using Fuzzy Logic Control Based Automatic Generation Control

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ABSTRACT

Cyber-attacks and false data injections can be done on Remote terminal units (RTU), intelligent electronic devices, measurement devices, communication networks and mostly automatic generation control system. This false data injection causes malicious operation of protective devices which leads to blackouts. False data injection is one of the security challenges to the smart grid. This project proposes the game theoretic approach in the combination of risk management techniques. Significances of false data intrusion are measured using risk assessment process. This process involves the conditional value at risk (CVaR) measure provides an estimation of defender's loss due to load shed done by false data injections. Then the calculated risks are used as input parameter to stochastic security game model. Based on the defensive measures, decisions are obtained by solving the security game. Thus the security game model provides some particular set of rules for choosing the best response strategies to minimize the risks against the false data injections by attacker.

False data can be detected by means of false data detection algorithms. The comparison is carried out between threshold based algorithm and cluster based algorithm. The project also focuses on minimizing the stabilizing time of the change in frequency (Δf).With the sample AGC controller, stabilizing time for the change in frequency (Δf) is more. To solve this problem, Fuzzy Logic Control (FLC) is used and hence better stabilizing time is achieved. The MATLAB/SIMULINK has been used to develop the proposed method and it is found that the proposed method is capable of producing better result.

Keywords:--Automatic generation control(AGC),under frequency load shedding (UFLS)scheme, Game theory, Smart grid, Fuzzy Logic Control(FLC)

Wireless Data Transmission Through Led

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ABSTRACT

Li-Fi (light-fidelity) technology is very new and was proposed by the German Physicist Harald Hass which means transmission of data through an LED light bulb that varies in intensity faster than human eye can follow. This paper aims at wireless transmission of data with the help of LED at the transmitter side and reception of data by the photodiode at the receiving side. There are two modes of operation .One is data mode ,in which the data is transmitted through LED and second one is robot mode ,in which the robot is moved in any directions with respect to the keys configured .This paper also gives information , how Wi-Fi is replaced by Li-Fi. Wi-Fi is used for general wireless coverage within buildings whereas Li-Fi is model for high density wireless data coverage in restricted areas in which there are no obstacles.. The term Li-Fi refers to VLC technology that uses as medium to deliver high-speed communication in a manner similar to Wi-Fi. Li-Fi provides better efficiency, bandwidth, availability and security than Wi-Fi and has already achieved high speeds in the lab. This paper provides a detailed explanation of Li-Fi technology, its benefits and future scope.

Keywords: — Visible Light Communication (VLC), LED (Light Emitting Diode), Wi-Fi (Wireless–Fidelity).

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Social Networking for City Safety - Abilities' and Unattended Challenges in Techniques Foreseeing Safety Value

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ABSTRACT

Power of Social Conversation" have moved beyond just a passing fed. People spend a staggering 700bn minutes per month on face book, twitter and other social networking sties. This social media has become part of how we lead our lives and the everyday events that are part of it. The maze of pictures, comments, events and social gaming could be our window into a gold mine of insights to predict catastrophic events especially around public security and disaster management. Main responsibility government agencies and municipalities to leverage the power of broadband connectivity to embrace the safe city approach, with centralized emergency response and management in the face of threats, attack, natural disasters, crime or industrial-scale accidents. In other words, effective communications is the groundwork of protecting lives and mitigating damage. This paper studies abilities and unattended challenges of various techniques which forecasts smart, safe cities, by combining the use of personal mobile devices and social networks to make users aware of the safety of their surroundings. And hence Precedes towards Limitations in the existing techniques and its Research challenges.

Keywords:—ARIMA,, PredPol software, NoVA

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Audio Cryptography

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ABSTRACT

Cryptography secures information by protecting its confidentiality. It can also be used to protect information about the integrity and authenticity of data. Stronger cryptographic techniques are needed to ensure the integrity of data stored on a machine that may be infected or under attack. So far Cryptography is used in many forms but using it with Audio files is

another Stronger Techniques. The process of Cryptography happens with Audio File for transferring more secure sensitive data. The Sensitive Data is Encoded with an Audio File and Passed over Insecure Channels to other end of Systems. Here we are using .wav file Format for Encryption and Decryption of Message. The given message will be encrypted with a given audio file using a secret key. The System will then embed the secret message into the audio file. The result will be a new audio file, which has the secret message in it. While decrypting the same key should be given for encrypted audio file to get the secret message from it.

Keywords:-- Cryptography, Secures information, Confidentiality, Encryption process, Decryption process, Least Significant Byte.

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Clustering and Content-Based Retrieval for Image Database

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ABSTRACT

With the proliferation of image data, the need to search and retrieve images efficiently and accurately from a large image database or a collection of image databases has drastically increased. To address such a demand, a unified framework called Markov Model Mediators (MMMs) is proposed in this paper to facilitate conceptual database clustering and to improve the query processing performance by analyzing the summarized knowledge. The unique characteristics of MMMs are that it provides the capabilities of exploring the affinity relations among the images at the database level and among the databases at the cluster level respectively, using an effective data mining process. At the database level, each database is modeled by an intra-database MMM which enables accurate image retrieval within the database. Then the conceptual database clustering is performed and cluster-level knowledge summarization is conducted to reduce the cost of retrieving images across the databases. This framework has been tested using a set of image databases, which contain various numbers of images with different dimensions and concept categories. The experimental results demonstrate

that our framework achieves better retrieval accuracy via inter-cluster retrieval than that of intra-cluster retrieval with minimal extra effort.

Keywords: Content-based Image Retrieval (CBIR), Image Database Clustering, Markov Model Mediators (MMMs).

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Detecting Malcious Facebok Applications

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ABSTRACT

With 20 million installs a day third-party apps are a major reason for the popularity and addictiveness of Face book. Unfortunately, hackers have realized the potential of using apps for spreading malware and spam. The problem is already significant, as we find that at least 13% of apps in our dataset are malicious. So far, the research community has focused on detecting malicious posts and campaigns. In this paper, we ask the question: given a Face book application, can we determine if it is malicious? Our key contribution is in developing FRAppE—Facebook's Rigorous Application Evaluator arguably the first tool focused on detecting malicious apps on Face- Finally, we explore the ecosystem of malicious Face book apps and identify mechanisms that these apps use to propagate. Interestingly, we find that many apps collude and support each other; in our dataset, we find 1, App piggybacking example. Finally, we explore the ecosystem of malicious Face book apps and identify mechanisms that these apps use to propagate. Interestingly, we find that many apps collude and support each other; in our dataset, we find App piggybacking example.

Keywords: Face book Apps, Malicious Apps, Profiling Apps, Online Social Networks

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Detecting Malicious Entities in Wireless Mesh Networks

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ABSTRACT

Multi-hop wireless mesh networks provide a community with a communication infrastructure which gives the ability to have a single or few connections to the internet along with each other. The core philosophy is that each node in the network would route each other packets for the benefit of everyone in the mesh network. This can give rise to a malicious node taking advantage of the forwarding nature in the network. A malicious node can drop the packets that should be forwarded and only forward its own packets therefore decreasing the benefits of the network for nodes upstream from the "bad" node. We present a Random Tester Detection Protocol (RTDP) that will detect the malicious node. The protocol leverages the broadcast nature of wireless networks along with anonymous messages to detect the free riding nodes. The protocol is evaluated in a network simulator created using Java.

Keywords:-- Random Tester Detection Protocol, Multi-hop wireless mesh networks, Dissemination

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Dynamic Search Algorithm for Message Routing In Unstructured Peer To Peer Network

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ABSTRACT

Each node won't have global information about the entire topology and the position of additional nodes in unstructured nodes. A dynamic feature of unstructured P2P network, occupying global behavior is so tough. Search algorithms to place the resources and to route the communication to the mark node. RW and flooding are two typical examples of blind search algorithm by this query messages are passed to neighbors without any knowledge about the probable locations of the queried resources or any importance for the route to end. The algorithms are not appropriate to route a message to target. The stated algorithm is dynamic research; this is generalizations of RW as well as flooding. Dynamic search uses knowledge – based search procedures. Every node will communicate query messages more sharply to approach the mark node.

Keywords:--Unstructured nodes, Dynamic feature, Unstructured P2P network, Flooding, Query messages

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Embedded Extended Visual Cryptography Schemes

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ABSTRACT

A visual cryptography scheme (VCS) is a kind of secret sharing scheme which allows the encoding of a secret image into shares distributed to participants. The beauty of such a scheme is that a set of qualified participants is able to recover the secret image without any cryptographic knowledge and computation devices. An extended visual cryptography scheme (EVCS) is a kind of VCS which consists of meaningful shares (compared to the random shares of traditional VCS). In this paper, we propose a construction of EVCS which is realized by embedding random shares into meaningful covering shares, and we call it the embedded EVCS. Experimental results compare some of the well-known EVCSs proposed in recent years systematically, and show that the proposed embedded EVCS has competitive visual quality compared with many of the well-known EVCSs in the literature. In addition, it has many specific advantages against these well-known EVCSs, respectively.

Keywords:-- Visual Cryptography Scheme, Data Compression Algorithm, Encoding Algorithm

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