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1.

Authors: Zeiad El-Saghir, Hamdy Kelash, Sayed Elnazly, Hossam Faheem

Paper Title: Parallel Implementation of Smith-Waterman Algorithm using MPI, OpenMP and Hybrid Model

Abstract: Pairwise sequence alignment is often used to reveal similarities between sequences, locate patterns of conservation, study gene regulation, and infer evolutionary relationships [1]. Although the Smith–Waterman is the only algorithm guaranteed to find the optimal local alignment, it is also the slowest one as it costs O(mn) for computation & space. Also the volume of biological data is doubling about every six months so the total cost is O(kmn) where k is the size of the database [2, 3]. By using parallel hardware and software architecture accurate results can be achieved in reasonable time. In this paper we show a comparative study for parallelizing smith-waterman algorithm using different parallel models, pure MPI, pure OpenMP and hybrid MPI/OpenMP model. Based on the results it will be proved that hybrid programming which employ the coarse grain and fine grain parallelization, is more efficient compared with pure MPI and pure OpenMP.

Keywords: Smith-Waterman algorithm; MPI; OpenMP; Hybrid MPI/OpenMP; bio-informatics; parallel programming.

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2.

Authors: Ponugoti Sri Lakshmi, Kande Dayakar, Dola Sanjay S

Paper Title: High Step-Up DC–DC Converter for AC Photovoltaic Module Application

Abstract: Photovoltaic (PV) power-generation market of ac PV module has shown obvious growth. However, a high voltage gain converter is essential for the module's grid connection through a dc–ac inverter. This paper proposes a converter that employs a floating active switch to isolate energy from the PV panel when the ac-module is OFF; this particular design protects installers and users from electrical hazards. Without extreme duty ratios and the numerous turns-ratios of a coupled inductor, this converter achieves a high step-up voltage-conversion ratio; the leakage inductor energy of the coupled inductor is efficiently recycled to the load. These features explain the module's high-efficiency performance. The detailed operating principles and steady-state analyses of continuous, discontinuous modes are described. A 15V input voltage, 200V output voltage, 100W output power proto type circuit of the proposed converter has been implemented; its maximum efficiency is up to 95.3% and full-load efficiency is 92.3%.

Keywords: AC module, coupled inductor, high step-up volt- age gain, single switch.

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Authors:	**Seyed Gholamreza Hashemi, Gholamreza Ghodrati Amiri, Seyed Ali Razavian Amrei**	
Paper Title:	**Necessity of Qom’s City Buildings Improvement**	

3.

Abstract: Earthquakes are natural phenomenon which can cause huge losses of life and economy .Due to locating on seismic belt and its seismic condition, Iran country, is very sensitive to earthquake. Because of estimating importance of damages and casualties through earthquake, many countries have selected different methods for seismic hazard analysis. The objective of the current study is to evaluate the seismic vulnerability of buildings in Qom city based on the Hazus method and geographical information system (GIS). To this end, structure of engineering specification, the peak ground acceleration and soil information layers were utilized for developing a geotechnical map. Since there is a lot of data, SELENA software is used for calculating. The results show that the buildings are in one and six districts need to improvement.

Keywords: Seismic Hazard Analysis; Hazus Method; improvement of buildings; Fragility Curve; Response Spectrum.

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4.

Authors: **Nikolaos Karatzidis, Vasileios C. Drosos, Kosmas-Aristotelis Doucas, Vasileios Giannoulas**

Paper Title: **Protection Degree from Forest Fires at the Mountainous Forests of Greece**

Abstract: Forest fires are an ancient phenomenon. Appear, however, with devastating frequency and intensity over the last 30 years. In our country, the climatic conditions in combination with the intense relief, favor their rapid spread. Considering the fact that environmental conditions provided for decades even worse (increased temperature, drought and vegetation), then the problem of forest fires in our country, is expected to become more intense. This paper aims to focus on developing an optimization model for the opening up of the forest mountainous areas taking into account the prevention and suppression of forest fires. Research areas are the mountainous forest complex of W. Nestos of Drama Prefecture, the university forest of Taxiarchis – Vrastama of Chalkidiki Prefecture and the forest complex of Lailias of Serres Prefecture. The percentage of forest protection area can be reached by fire hose is examined under the light whether the total hose length corresponds to the actual operational capacity to reach a fire source. The most important forest technical infrastructures to prevent fire are road networks (opening up) for fire protection and buffer zones. Patrols of small and agile van 4×4 appropriately equipped (hose length of 500 meters and putting pressure on uphill to 300 meters) for the first attack of the fire in the summer months coupled with early warning of fire lookout stations adequately cover the forest protection of the mountainous forest areas.

Keywords: GIS, opening up, protection, wild fires.

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5.

Authors: **Nukman Bin Yusoff, Abdulaziz S. Alaboodi, Osama I. Alsultan**

Paper Title: **Investigation of CNC Turning Tool Wearing using Image Processes**

Abstract: Tool wear affects both spacemen dimensional precision and surface quality. Therefore, the prediction of tool wear amount during machining processes is very important in order to obtain high precision parts, which is reducing the manual fit operations, and production cost. Image processing analysis has been used to investigate tool wearing. One of the most common methods for image processing is texture analysis. That is the gray level co-occurrence matrix (GLCM), which have large number of texture features. In this paper, the relationship between GLCM texture features and the cutting tool wear in CNC turning operations has been investigated. Cutting tool wear has been represented by the machining time. A vision system has been employed to capture images for specimens with various machining time for the same cutting tool then images will analyzed by MATLAB functions codes, to calculate the texture features. Results showed that four texture features have good correlations with the machining time of the cutting tool.

Keywords: CNC, GLCM, Tool Wearing, texture features, vision system, Image processing.

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6.

Authors:	**M. K. Sharma, Kuldip Singh, Ashok Kumar**
Paper Title:	**MHD Flow and Heat Transfer through a Circular Cylinder Partially Filled with non-Darcy Porous Media**

Abstract: Steady incompressible axisymmetric flow in a circular cylinder partially filled with concentric cylinder of non-Darcy porous medium is studied in the influence of a transverse static magnetic field. The Joule heating effect produced by the magnetic field is also included to analyze effect of magnetic field and fluid flow field on heat convection process. The governing equations of flow and heat transfer are non-linear coupled differential equations, are solved with Quasi-numerical method – the Differential Transform method. The velocity and temperature profiles for the fluid saturated porous region and clear fluid annulus region are derived and computed with the use of Matlab at various physical parameters and there effects are discussed through graphs. The skin-friction coefficient and Nusselt number at the wall of the outer cylinder and at the surface of the concentric inner porous cylinder are computed and discussed.

Keywords: MHD, non-Darcy, Partial filled circular pipe, Joule heating.

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7.

Authors: **Brijesh Kumar Patel, Mukti Pathak**

Paper Title: **Survey on Cryptography Algorithms**

Abstract: Cryptography is that discover and study of methods and procedures for secure communication within the existence of third parties. There is a great number of techniques used in order to achieve the integrity, availability and data protection to secure information. This paper will present a viewpoint on the current state of play in the field of cryptography algorithms. Cryptography offers a lot of techniques which nowadays are difficult to fail. In this paper, we want to prove competency of different techniques by comparing the different types of crypto algorithms like DES, TDES, AES, Blowfish, PGP , RSA and also by presenting their weaknesses and strengths.

Keywords: Cryptography, AES, DES, TDES, Blowfish, PGP, RSA

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8.

Authors: **B. Suresh Kumar, B. L. Shivakumar**

Paper Title: **Spine Segmentation in Medical Image Processing using Unsupervised learning**

Abstract: Image segmentation may be a method of segmenting a picture into teams of pixels supported some criterions. The aim of image segmentation is to alter or change the image illustration for the aim of straightforward understanding or faster analysis. Previously the fuzzy C-means (FCM) cluster algorithmic program was for the most part utilized in numerous medical image segmentation approaches. The normal two-component MRF model for segmentation needs coaching knowledge to estimate necessary model parameters and is therefore unsuitable for unsupervised segmentation. In order to beat the disadvantages of as sorted segmentation processes a brand new methodology of unattended segmentation is projected victimization ROR (Robust Outlyingness Ratio). The advantages of proposed method are to improve accuracy level and speed of time.

Keywords: Adaptive Fuzzy K-Means (AFKM), Centrum, Fuzzy-C-Means (FCM), Spinal cord, unattended segmentation, Vertebral..

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9.

Authors: **Leelavathy S. R**

Paper Title: **An Improved Distance Vector by Naming and Protecting from Wormholes in Wireless Sensor Networks**

Abstract: Node localization becomes an important issue in the wireless sensor network as its broad applications in environment monitoring, emergency rescue and battlefield surveillance, etc. fundamentally the DV-Hop localization mechanism function well with the support of beacon nodes that have the potential of self-positioning. However, if the network is invaded by a wormhole attack, the attacker can tunnel the packets via the wormhole link to cause severe impacts on the DV-Hop localization process. The distance- vector propagation phase during the localization even aggravates the positioning result, compared to the localization schemes without wormhole attacks. In this paper, the impacts of wormhole attack on DV- Hop localization scheme and advanced DV -Hop localization. Based on this a label-based secure localization scheme is proposed to defend against the wormhole attack

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Keywords: Localization, sensors, beacons, naming, WSN, Distance vector, improved DV Hop.

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10.

Authors: **Rakesh Roshan**

Paper Title: **Ex-Post Investigation of ERP Business Value in an Indian Organization**

Abstract: Due to huge amount of investment and collective efforts to implement and run ERP system , the primary question to ERP systems business value has been a key concern. The present case study reports the effect of Enterprise Resource Planning (ERP) and its impact on the performance of organization. The SAP-LAP has been employed to better understanding of the integration of the system. The single indian case study was used for this investigation. Before investigation, the performance indicators of the organization were identified by conducting interviews with the managers. This study provides an opportunity to adopt the better approach in implementation of the ERP systems in similar type of organizations.

Keywords: RP, SAP-LAP, Business Value, Organization.

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11.

Authors: **Neelesh Dutt Pandey, Subhadeep Chakraborti, Arindam Ghosal**

Paper Title: **A Review of Solar Air Conditioning System**

Abstract: Solar air conditioning can be done through solar thermal energy conversion and photovoltaic conversion (sunlight to electricity). The U.S. Energy Independence and Security Act of 2007[1] created 2008 through 2012 funding for a new solar air conditioning research and development program, which should develop and demonstrate multiple new technology innovations and mass production economies of scale. Solar air conditioning might play an increasing role in zero-energy and energy-plus buildings design.

Keywords: solar energy, thermal energy collector, free energy, radiant cooling.

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12.

Authors: Mohamed Alnas, Nassr Abuhamoud, Elmabruk Laias

Paper Title: Evaluation of L2 Trigger Impact on Fast Mobile IPv6 Handover

Abstract: Mobile IPv6 with fast Handover enables a Mobile Node (MN) to quickly detect at the IP layer that it has moved to a new subnet by receiving link-related information from the link-layer; furthermore it gathers anticipative information about the new Access Point (AP) and the associated subnet prefix when the MN is still connected to the previous Corresponding Node (CN). The aim of this paper for the fast Mobile IPv6 handover (FMIPv6) protocol is to allow an MN to configure a new Care-of-Address (nCoA), before it moves and connects to a new network. Furthermore, the FMIPv6 protocol seeks to eliminate the latency involved during the MN's Binding Update (BU) procedure by providing a bi-directional tunnel between the old and new networks while the BU procedures are being performed

Keywords: Mobile IPv6; Fast Handover; L2 Information; L3; Handover Latency; Packet Loss;

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13.

Authors: Renuka S. Anami, Gauri R. Rao

Paper Title: Automated Profile Extraction and Classification with Stanford Algorithm

Abstract: The enterprises and multinational companies receive thousands of resumes from the job seekers during this Internet era. Currently available filtering techniques and search services provide the recruiters to filter thousands of resumes to few hundred potential ones. It is difficult to identify the potential resumes by examining each resume, since these filtered resumes are similar to each other. We are investigating the issues related to the development of approaches to improve the performance of resume selection process. We have extended the concept of special features and also proposed an approach to identify resumes with special skills. In the literature, the concepts of special features have been applied to improve the process of candidate selection in E-commerce environment. As resumes contain unformatted text or semi-formatted text, extending the concept of special features for the development of approach to process resumes is a complex task. Only skills related formation of the resumes is obtained by considering this system approach. The experimental results of the real world set of resumes show that the proposed approach has the potential to improve the process of resume selection. An effective way of an approach for extraction of information from the resumes is achieved by the system .It supports routing and management of resumes automatically. The framework of an IE gives the extraction process of resumes along with the required information regarding the algorithms related with this extraction.
The overall objective of the study is to provide the required information about the skills and experience to human resource system. This system provides the resumes to be extracted in a structured format for the semantic web approach.

Keywords: NLP, HTML, JAVA, Candidate Profile, Information Extraction (IE), CSS.

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14.

Authors: **Shweta Ujwal Bagadi, Giridhar P. Jain**

Paper Title: **Fingerprint Verification using Statistical and Co-Occurrence Matrix Features**

Abstract: Fingerprint identification is one of the most well-known and publicized biometrics. Because of their uniqueness and consistency over time, fingerprints have been used for identification for over a century, more recently becoming automated (i.e. a biometric) due to advancement in computing capabilities. Fingerprint identification is popular because of the inherent ease in acquisition, the numerous sources (ten fingers) available for collections, and their established use and collections by law enforcement and immigration. Fingerprint verification is one of the most reliable personal identification method and it plays a very important role in forensic and civilian applications. However, manual fingerprint verification is so tedious, time-consuming, and expensive that it is incapable of meeting today's increasing performance requirements. Hence, an automatic fingerprint identification system (AFIS) is widely needed. Proposed system describes the design and implementation of an off-line fingerprint verification system using wavelet transforms. In this method, matching is done between the input image and the stored template without resorting to exhaustive search using the extracted feature.

Keywords: fingerprint verification, wavelet transform, automatic fingerprint identification system (AFIS),

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15.

Authors: **Abedalmuhdi Almomany, Afnan Alquraan, Lakshmy Balachandran**

Paper Title: **GCC vs. ICC comparison using PARSEC Benchmarks**

Abstract: Our goal is to compare the impact of various compiler optimizations on program performance using two widely used state-of-the-art compiler suites: GNU C Compiler and Intel's C/C++ Compiler using PARSEC benchmarks. Compiler optimization is the process of tuning the output of a compiler to minimize or maximize some of the attributes of an executable computer program. Optimization of a compiler can be done by turning on optimization flags. In this paper, we investigate the chances of enhancing the program performance by better utilization of the existing architectural features such as compiler optimization. Proper utilization of such architectural features would not only enhance the program performance, but also reduce the need for costly upgrades as well as the system cost under development.

Keywords: compiler, icc, gcc, PARSEC.

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16.

Authors:	**Abedalmuhdi Almomany, Afnan Alquraan, Lakshmy Balachandran**
Paper Title:	**Three-Phase Four-Wire Distribution System Utilizing Unified Power Quality Conditioner**

Abstract: This paper presents a novel structure for a threephase four-wire (3P4W) distribution system utilizing unified power quality conditioner (UPQC). The 3P4W system is realized from a three-phase three-wire system where the neutral of series transformer used in series part UPQC is considered as the fourth wire for the 3P4W system. A new control strategy to balance the unbalanced load currents is also presented in this paper. The neutral current that may flow toward transformer neutral point is compensated by using a four-leg voltage source inverter topology for shunt part. Thus, the series transformer neutral will be at virtual zero potential during all operating conditions. The simulation results based on MATLAB/Simulink are presented to show the effectiveness of the proposed UPQC-based 3P4W distribution system.

Keywords: Active power filter (APF), four-leg voltage-source inverter (VSI) structure, three-phase four-wire (3P4W) system, unified power quality conditioner (UPQC).

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Authors: **Ashish Negi, Himanshu Saini**

Paper Title: **An Overview of Intrusion Detection System in Computer Networks**

Abstract: the world has seen an era of advanced changes in networking field. This has been results in development of information exchange across all over the world. It leads to dependency on network for files transaction and valuable data. During past decades a numerous security attacks has been attempted on these networks. To ensure these networks safety Intrusion Detection System has been designed to prevent from such security attacks. Intrusion detection is a type of security management system for computer networks which gathers and analyzes information from various areas within networks to identify possible security contravention. This paper is intended to provide an overview of intrusion detection system and to give a brief idea about network protection against theft and threat.

Keywords: Intrusion detection system, fuzzy logic, artificial intelligence.

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Authors: **Salman Khan B. R, Arun Patro, Siva S. Yellampalli**

Paper Title: **Design of UART Protocol with Interrupt Logic and Status Register**

Abstract: Universal Asynchronous Receiver Transmitter (UART) is used in data communication process especially for its advantages of high reliability, long distance and low cost. This paper targets the interrupt logic and Status register to UART. The 8-bit UART with status register and Interrupt module is coded in Verilog HDL and synthesized and simulated using Xilinx ISE version 12.2 and Modelsim. 9600bps Baud Rate is used for Proposed Architecture. 207.220MHZ maximum frequency is obtained from Spartan 3e Xc3s400.In Proposed Architecture 25MHZ is used as system clock.

Keywords: Universal Asynchronous Receiver Transmitter, Status Register , Asynchronous Serial Communication

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19.

Authors: **Thirupathi Naidu P, Ashok Kumar V, Kranthi R**

Paper Title: **High Speed RC4 Algorithm Based on True Dual Port RAM by using Verilog HDL**

Abstract: This paper presents high speed hardware implementation and an area efficient of the RC4 algorithm based on True Dual Port (TDP) RAM. The proposed architecture uses Block RAM (BRAM) implementation to reduce the area and to increase the speed of operation hence throughput. The proposed design uses only one 256 bytes True Dual Port RAM for key stream generation and it needs two clock cycles per one byte. It supports 1 byte to 256 bytes of variable key length and it achieves 71.39 MB/s throughput at 142.78 MHz maximum operating frequency. The True Dual Port RAM RC4 algorithm is implemented in Verilog HDL. The Proposed design is targeted on XC4VFX12-12SF363 Xilinx FPGA and met the operating frequency of 142.78 MHz.

Keywords: True Dual Port RAM, BRAM, CPLD, FPGA, RC4 Algorithm and Stream Cipher.

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Authors: **Sanjay H. Dabhole, Sharad T. Jadhav**

Paper Title: **An Efficient Codec of 2D Adaptive Directional Lifting based SPL5/3 with Improved SPIHT Algorithm for Lossless Image Coding**

Abstract: Lifting is an efficient algorithm to implement the discrete wavelet transform in order to overcome the drawbacks of the conventional wavelet transform that does not provide a compact representation of edges which are not in horizontal and vertical directions. The lifting scheme provides a general and flexible tool for the construction of wavelet decompositions and perfect reconstruction filter banks. It has been adopted in JPEG 2000. The paper follows this research line, novel 2 D Adaptive Directional Lifting based on SPL 5/3 has analyzed, structured and tuned with improved SPIHT based on adaptive coding for lossless JPEG 2000 image coding. The proposed 2D-ADL scheme incorporates the directionally spatial prediction into the conventional lifting based on 5/3 wavelet transform and forms a novel, efficient and flexible lifting structure with proposed scaling coefficients. In order to obtain better compression on image edge, an improved Set Partitioning In Hierarchical Trees (ASPIHT) algorithm based on prior scanning the coefficients around which there were more significant coefficients was replaced with conventional SPIHT. Although, the proposed 2D-ADL based on SPL5/3 scheme followed by ASPIHT codec significantly reduce edge artifacts and ringing and outperforms the conventional 1D lifting scheme followed by SPIHT upto 8.4 dB as reported.

Keywords: Adaptive Directional Lifting, SPL 5/3, JPEG 2000, Image Coding, ASPIHT, SPIHT, Compression, PSNR, MSE.

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21.	**Authors:**	**Sharad T. Jadhav, Sanjay H. Dabhole**
	Paper Title:	**An Optimal Detection of Polyp and Ulcer in WCE Images using Fast BEMD with DLac Analysis**

Abstract: the main contribution of this paper is the presentation of a novel tool for WCE image analysis and classification by exploiting color-texture features. The proposed scheme has based on the ingenious combination of BEEMD and DLac, applied on the green/red component of WCE images in order to identify ulcerations. BEEMD, apart from an adaptive image denoising tool, was exploited to reveal the intrinsic components (IMFs) of the images in order to achieve data driven, Coefficient of Variance (CV), boost the distinctness between polyp and ulcer regions and facilitate DLac analysis to extract efficient texture characteristics. Optimum IMF selection based on the structure patterns of IMFs disclosed by DLac. The optimum IMFs are used to reconstruct a new refined image. The proposed approach has evaluated on selected WCE images, captured from patients, depicting ulcer and polyp tissue. The optimum image components (IMFs) that contain the majority of texture information include IMFs 5 and 8. Individual IMFs score up to 85.8% classification accuracy, while their exploitation as a group enhances the detection rate up to 94.3% for ulcer and polyp tissue.

Keywords: IMF, DLAC, CV, POLYP, Ulcer, WCE, EMD, BEEMD,GI,

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Authors: **P. A. Bhalge, S. Y. Amdani**

Paper Title: **Fast Block Based Motion Estimation using Various Search Patterns**

Abstract: Accurate motion estimation is a key factor for achieving enhanced compression ratio. It is the process of determining an offset to a suitable reference area in previously coded frame and has a significant effect on performance of coders and decoders (CODEC).This paper is survey paper for block based motion estimation. This paper describes the classical Full search motion estimation algorithm, diamond search, hexagonal search and octagon with square pattern search algorithm for motion estimation.

Keywords: Block matching, Diamond Search, Hexagonal Search, Motion Estimation, Video Coding.

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Authors: **Nganthoi Naorem, Th. Kiranbala Devi**

Paper Title: **Estimation of Potential Evapotranspiration using Empirical Models for Imphal**

Abstract: Estimation of evapotranspiration of an area is highly essential for irrigation scheduling and design of irrigation project. It is the basic parameter for estimating the crop water requirements. In this study, Potential evapotranspiration (PET) were computed using 10 empirical models viz. Blaney-Criddle, Thornthwaite, Hargreaves, Penman, Penman-Monteith, Jensen-Haise, Turc, Priestley-Taylor, Makkink and Open pan method with the help of climatological data for the year 2012 for Imphal, Manipur. The missing climatic data to be used in the empirical models are computed according to the guidelines given in FAO Irrigation and Drainage paper, 56.FAO Rome, Italy. The empirically estimated PET from all these models were validated with the actual measured mesh covered pan

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evaporation value using calibration co-efficients. From the study, Hargreaves method was found to be the most suitable method for the region with least biasness and minimum error. The calibration co-efficients developed in this study can be used for reducing the error of estimating evapotranspiration by these empirical models for the area under study.

Keywords: Calibration co-efficients, Error analysis, Missing Climatic data, Pan evaporation, Potential Evapotranspiration.

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Authors: **K. Harinadha Reddy**

Paper Title: **Study and Analysis of LFC with Wind Plant in Two Area Power System through Fuzzy Inference Technique**

Abstract: The proposed work is mainly about the study and analysis of load frequency control (LFC) of two area power system consisting thermal power plant and wind power plant. Output of wind plant connected in interconnected power system is regulated with help of Fuzzy Inference Technique. Three Adaptive Neuro-Fuzzy Inference System (ANFIS) controllers are used in proposed work. Gain of speed regulation is controlled by first ANFIS. Two Adaptive Neuro-Fuzzy Inference System's are used to obtain control over the wind and thermal power plant gains. Inputs for FLC are obtained from change in frequency and derivative of change in frequency of interconnected power system. Fuzzy logic Controller (FLC) inputs are properly and carefully taken for obtaining control vector from defuzzified output of FLC. The output of self tuned FLC with all ANFIS's in two plants are shown their performance under test conditions.

Keywords: Load Frequency Control, Interconnected Power System, Wind Power Plant, Fuzzy Logic Controller and

Adaptive Neuro-Fuzzy Inference System

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Authors: **Issa Najafi**

Paper Title: **E-Trust Assessment on E-commerce**

Abstract: The E-Commerce, as to the nature of the transaction between both parties, is represented in various classifications and includes a framework of computer programs and systems that undertake services in the internet, which are search for information, exchange management, study of rating condition, provision of rating, online payment mode, summary of report and account management. These are the foundations which insure the internet organized activities, increasing the efficiency of transacting parties. For these transactions, system security must be provided and create the necessary ground for mutual trust between the parties, trust towards the system operation, as well as trust towards the relevant product, brand or service[1]. In Internet or electronic environment the trust concept is represented as 'e-trust or electronic trust ' formulation. The E-Trust , whose concept is the willingness of the truster (one party) to accept the risks and vulnerability against an internet vendor based on positive expectations about the characteristics and future behaviors of the trustee (other party) , is created with difficulties for an online seller[1]. In this research firstly , we survey the concept of trust , e-Trust , trust factors , trust life cycle and then,

identify and introduce the e-trust building models , methods and enhancing in the context of E-commerce .

Keywords: Trust, E-Trust, E-Commerce, E-Trust Building, E- Environment, Assessment

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26.

Authors: **Priti Kalode, Onkar S. Kemkar, P. R. Gundalwar**

Paper Title: **Computer Assisted Medical Health System for the Benefit of Hard to Reach Rural Area**

Abstract: It is a known fact that medical practitioners seldom prefer to work in rural areas. For providing medical help to rural population more particularly to people from hard to reach areas computer assisted medical health system is developed. This paper discusses the method for fast clinical assistance in hard to reach places & its applicability.

Keywords: EHealth, Health and medical informatics, Analysis, Management of Healthcare, IT & HIS, Knowledge Management

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27.

Authors: **Arifuzzaman Md, Tosikur Rahman, Ahammad Emtiaz, Islam Md. Rashedul, Nafiz Ahmed Chisty**

Paper Title: **Bengali and English Vehicles Number Plate Recognition System using MATLAB**

Abstract: Automatic Number Plate Localization and Recognition (ANPR) is a method that uses template matching on images to read the number plate of vehicles. This paper presents a robust method of license plate localization,

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segmentation and recognition of the character present in the located plate using an algorithm, which is based on pixel. The whole process has been designed in such a way that it can detect the conventional English number plate and can also detect Bengali alphanumeric number plate with adjoined Bengali letter by an easy and efficient algorithm which is robust to work and less time consuming. The ANPR systems are largely recommended for security system like traffic monitoring, electronic toll collection, and surveillance device and safety supervision. This whole system has been developed using MATLAB R2009a.

Keywords: ANPR, Character Recognition, Number Plate Localization, Template matching.

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28.	**Authors:**	**Farooq Saeed**
	Paper Title:	**An Interactive Design Tool for Engine Sand Separator System**

Abstract: This paper presents the details of development of an efficient interactive design tool for aircraft engine sand separator systems. The development of such a tool was felt necessary to address the problem of sand ingestion in gas turbine engines; a vital concern for the aviation and gas-turbine based electricity generation industry communities operating in desert environments as it can seriously affect the operation, performance and life cycle of a turbine engine. The design tool makes use of state-of-the-art practical geometry design and analysis technique, namely the inverse airfoil design method for the design of specific profiles for engine air intakes. The sand separator design is achieved by giving a specific contour to the intake profile, such as a highly curved bend in the duct, so that the contaminants because of their inertial momentum are forced away from the central flow. Since the sand particles can rebound of the air intake walls and enter the engine, the method takes into account sand particle rebound or restitution characteristics in the design. The design is accomplished with the aid of optimization techniques in both the inverse aerodynamic design as well as in the sand separator system design. In addition, to facilitate the analysis and design in an interactive manner, a MATLAB GUI has been developed. Details of the analysis and design tool are presented along with simple but practical design examples to demonstrate the usefulness and utility of the method and the interactive tool

Keywords: Sand ingestion, inertial particle separator, inverse airfoil design, potential flow, sand particle trajectory

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29.

Authors: **Sumedha Sengar**

Paper Title: **Charging of Batteries and Checking their Autonomy with Variable Stand-Alone Photovoltaic Systems in Field Conditions**

Abstract: Solar energy is a vital that can make environment friendly energy more flexible and commercially widespread. As Sun is not available the whole day and during cloudy days, storage of electricity is required. Storage batteries are expensive and so are the solar photovoltaic (PV) panels. Hence, it is imperative that each stand-alone PV system is suitably designed depending on load (resistive) and autonomy requirements. In this work, 2 KW to 5 KW stand-alone photovoltaic systems for variable load requirements for charging of batteries is studied. Experiments are done to change the PV string size and number of strings to see its effect on actual charge delivery. The experimental setup has been made in which panel string size, batteries capacity and load may be varied.

Keywords: Batteries, Photovoltaic (PV) Panels.

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30.

Authors: **Priyanka Dharane, A. S. Vibhute**

Paper Title: **Literature Survey on Development of An Algorithm for Face Recognition using Wavelet Neural Network**

Abstract: Automatic face recognition system is an important component of intelligent human computer interaction systems for biometric. It is an attractive biometric approach, to distinguish one person from another. To perform Automatic face recognition system, the hybrid approach Wavelets face detection and Neural Network based Face Recognition is used. The face recognition accuracy is can be increased using a combination of Wavelet, PCA, and Neural Networks. Preprocessing, feature extraction and classification rules are three crucial issues for face recognition. For preprocessing and feature extraction steps, we apply a combination of wavelet transform and PCA.

During the classification stage, the Neural Network (MLP) is explored to achieve a robust decision in presence of wide facial variations.

Keywords: Face detection, Neural Network, PCA, Face Recognition, Wavelet

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31.

Authors: **P. Venkata Narayana, K. H. Phani Sree**

Paper Title: **Small Signal Stability Analysis of a Wind Penetrated Electricity Distribution System**

Abstract: The new types of generating systems such as wind generators, PV based static generators, diesel generators, and power from cogeneration plants have been introduced in to the system resulting in new challenges to stability, operation and control of the power system and its components. The reason being intermittent nature of the such types of generation. Due to their unregulated operation, the generators may impose a serious threat to the small signal stability. This paper analyses the small signal stability of the test distribution system at various penetration levels of wind generation in to the test system. For this purpose, eigen values and participation factor approaches have been chosen for analysis.

Keywords: Distributed generation, small signal stability, eigen value analysis, participation factor, Power System Analysis Toolbox (PSAT)

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