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Paper Title: GUI Based Power System Simulation Tool

Abstract: GUI (Graphical User Interface) based simulation tool has been developed for power system simulation lab and it can be used as an educational tool for analysis of power system. GUI figure file is developed in MATLAB environment for performance of transmission line, Y bus formation, Power angle curve, Fault studies, line flow and losses. The user can enter the data and obtain the results quickly in the form of data or figures. The advantages of GUI based simulations are

- Less time required for execution
- Students can solve and verify any power system problems in this area.
- The user can observe the effect of changing any parameters on the output data.

An educational tool has been developed for the students to check the accuracy of their calculations and to observe the variations of input data and results and waveforms.

Keywords: Graphical user interface, MATLAB, power system analysis

References:
4. Creating Graphical User Interface,’ www.mathworks.com’

Authors: V.Srimahaswaran, R.Uthirasy

Paper Title: Cascaded Multilevel Inverter for PV Cell Application Using PIC Microcontroller

Abstract: The PV power generation have low efficiency due to the various constrains. This paper gives a new proposed method to improve the performance of the PV system. The PV cell is connected to boost chopper and Multi-Level Inverter (MLI). In order to improve the efficiency and for making the power generation available to the grid MLI is employed. MLI have emerged as attractive high power medium voltage converter to reduce harmonic component in the output current due to filter. In the proposed MLI there are 2-H bridge inverters to achieve the 5-level output voltage. A SPWM technique is used to generate the PWM signal for boost chopper inverter switches. Boost chopper is connected between the PV array and MLI. The purpose of boost chopper is to step-up the voltage and to produce continuous current to MLI. The simulation results are validated for the improvement in the PV cell system. The hardware is implemented with boost chopper and multilevel inverter. The PIC microcontroller is used to generate the PWM signal for boost chopper and inverter switches. Boost chopper output is fed to multilevel inverter and the stepped wave is obtained. The results obtained through simulation are verified with hardware results obtained.

5. Keywords: PV Array, Boost Chopper, and Multi Level Inverter.

References:
## Authors: Sagnik Bhattacharya, M. B. Panbu

### Paper Title: Design and Development of Mobile Campus, an Android based Mobile Application for University Campus Tour Guide

### Abstract: Android is an open source mobile operating system based on Linux with java support. It comes under free and open source software licenses. As per first quarter Report of the year 2012, 400 million people are using Android based devices worldwide and 59% of smart phone market is occupied by android based smart phones [1]. Android provides the support of mobile map and GPS localization. Android based mobile tour-guide application can provide valuable information on different landmarks of a university campus and guide students/parents/visitors to find the desired places in campus with more ease. In this paper we are proposing a tour guide application called Mobile Campus on android based mobile platform for SRM University campus. Near field communication (NFC) is a set of standards for smart phones and similar devices to establish radio communication with each other by touching them together or bringing them into close proximity, usually no more than a few centimeters. This tour guide application includes functionality such as locating current location of users, showing university campus map, route direction of university shuttle and gives small description & contact information of important places on campus.

### Keywords: Android, Android Beam Bluetooth, Global Positioning System (GPS), Near Field Communication (NFC), (NFC Data Exchange Format (NDEF)).

### References:

## Authors: Jibran Khan

### Paper Title: Preliminary Results – Hyperspectral Image Analysis for Dolomite Identification in Tarbela Dam Region of Pakistan

### Abstract: The blessings of hyperspectral remote sensing are manifold and it has enabled researchers to locate, map and identify different materials on the surface of Earth. Hyperspectral remote sensing play a key role in mineral mapping activities and it can be a much powerful and cost effective tool for mineral development activities in a developing country like Pakistan where there are rich mineral resources but lack of means of extraction is still a constraint in their efficient usage for betterment of country’s economy. In this paper we investigate the adequacy of the hyperspectral remote sensing data acquired by Earth Observing -1 (EO-1) hyperspectral sensor, over an area of Tarbela Dam region (Lat. 320 05’N, Long. 720 41’ E), which is a rich mineral resource of Pakistan. Many notable minerals have been found in this region among which analysis of identification of dolomite through hyperspectral imagery of Tarbela Dam region is the major aspiration of this research article. The results presented in this paper may refer to the preliminary steps that can be taken for minerals identification using hyperspectral imaging in Pakistan.

The analysis of spectral signature of the dolomite which is a sedimentary carbonate rock and a mineral both composed of calcium magnesium carbonate is described through software Erdas IMAGINE®. However large noise ratio showed to represent a constraint for dolomite identification as it is likely to conceal spectral information due to rocks and vegetation cover. In the end, we suggest some techniques to help improve these analyses.

### Keywords: Hyperspectral remote sensing, Tarbela Dam, spectral information, noise ratio, mineral mapping.

### References:


Authors: Jyotirmayee Rautaray, Raghvendra Kumar

Paper Title: Distributed Database using Randomized Response Technique in FP Tree Algorithm

Abstract: Data mining is broadly used in all walks of existence. Through the association rule mining, the practical storage space location of commodities can be found. This paper mainly uses FP-tree algorithm and combines with distributed secure sum protocol as well as secure multi party computation using randomized response technique to provide the more privacy to the distributed database in the homogeneous horizontal partitioned distributed environment.

Keywords: Distributed Secure Sum Protocol, FP Tree Algorithm, Randomized response technique, Secure Multi Party Computation.

References:


Authors: Sudakshina Dasgupta, Paramartha Dutta

Paper Title: A Novel Game Theoretic Approach for Cluster Head Selection in WSN

Abstract: In recent years wireless sensor network (WSN) is an active domain of research. A WSN consists of a number of sensor nodes each with limited energy, bandwidth, storage and processing capabilities. Clustering is one of the basic approaches that offer a practical way of providing scalability when designing a large and dense sensor networks. One of the approaches to enhance the survivability of WSN is to allow only some sensor nodes in a cluster of sensor nodes, called cluster heads, to communicate with the base station. In this paper we have proposed a Game
theoretical approach for selecting a cluster head for every cluster in a WSN. Games can be a single round or repetitive. The scope a player enjoys in making his or her moves constitutes the player’s “strategy”. Rules govern the outcome for the set of moves taken by the players and outcomes produce payoffs for the various players which can be expressed by means of a payoff matrix. However, the clustering problem in wireless sensor network, related to self-organization of nodes into large groups and selection of head, has not been studied under this framework. In this case, our goal is to provide a game theoretical modeling of cluster-head selection for wireless sensor networks. A game of scheduling of nodes for taking the responsibility of cluster head, is an interactive decision making process between a set of self-interested nodes.

Keywords: Game Theory, payoff, clustering, Wireless sensor network, Cluster head.

References:

Translation Authors: Deep Tak, Shalini Rajawat, Vijay Singh Rathore

Paper Title: High Performance Computation Through Slicing and Value Replacement with CCDD Approach

Abstract: In software development and maintenance stages, programmers need to frequently debug the software. Software fault localization is one of the most exclusive, tedious and time intense activities in program debugging. A common approach to fix software error is computing suspiciousness of program elements according to failed test executions and passed test executions. However, this technique does not give full consideration to dependences
Keywords: CCDD (Coupling Control and Data Dependency) approach, Slicing Technique, Value Replacement

References:

Authors: Md. Abu Raihan, Seung Lock Han

Paper Title: Situation Analysis of Engineering Institutions for Interactive & Collaborative Web-based e-Learning: Case of Bangladesh

Abstract: Aims of the study were to investigate physical facilities of technical and vocational education and training (TVET) classrooms, to assess infrastructural conditions of TVET institutions, to find out existing instructional problems of TVET institutions, and to identify the needs & weakness of TVET students to introduce interactive & collaborative Web-based eLearning. A great deal of efforts has been made by the researchers to analysis the current situations of TVET in terms of classroom facilities & infrastructural conditions. 210 classrooms from 45 TVET institutions were observed to collect data carried out by the study. 477 students, 187 teachers, & 86 Lab attendants of TVET have given their opinions. Based on findings & results of analysis the needs, weakness & existing problems of instructions, the study suggest interactive & collaborative methodology. Value of the findings will have to consider integrating Web-technologies in teaching-learning in future proposed by the study.

Keywords: Physical facilities & Infrastructural

References:

Authors: Shibin D, Blessed Prince P
Paper Title: Survey on Efficient and Forward Secure Schemes for Unattended WSNs
Abstract: Unattended Wireless Sensor Networks face challenges in providing good security and in showing good performance. The lack of communication with the final data receivers is the main reason for this. It is possible for the UWSNs to gather the sensible data for long time. These data are vulnerable to adversaries who can compromise the sensors and maneuver the sensed data. This paper describes how various methodologies are used to act against the adversaries troubling the UWSNs. The various cryptographic measures have to take the vulnerabilities into consideration thus making the network improve its performance and security. In this survey paper, a detailed study about the various schemes that increase the efficiency and performance of UWSNs and the measures taken to improve forward security are given.

Keywords: Aggregate Signature, Digital Signatures, Forward-Secure Property, HaSAFSS Scheme, Keying materials, Overhead, Unattended Wireless Sensor Networks.

References:

Authors: A.S.Syed Navaz, S.Gopalakrishnan, R.Meena
Paper Title: Anomaly Detections in Internet traffic Using Empirical Measures
Abstract: Introducing Internet traffic anomaly detection mechanism based on large deviations results for empirical measures. Using past traffic traces we characterize network traffic during various time-of-day intervals, assuming that it is anomaly-free. Throughout, we compare the two approaches presenting their advantages and disadvantages to identify and classify temporal network anomalies. We also demonstrate how our framework can be used to monitor traffic from multiple network elements in order to identify both spatial and temporal anomalies. We validate our techniques by analyzing real traffic traces with time-stamped anomalies.

Keywords: Server, Client, Network, Anomaly Detection

References:
With an increase in financial accounting fraud in the current economic scenario experienced, financial accounting fraud detection has become an emerging topics of great importance for academics, research and industries. Financial fraud is a deliberate act that is contrary to law, rule or policy with intent to obtain unauthorized financial benefit and intentional misstatements or omission of amounts by deceiving users of financial statements, especially investors and creditors. Data mining techniques are providing great aid in financial accounting fraud detection, since dealing with the large data volumes and complexities of financial data are big challenges for forensic accounting. Financial fraud can be classified into four: bank fraud, insurance fraud, securities and commodities fraud. Fraud is nothing but wrongful or criminal trick planned to result in financial or personal gains. This paper describes the applications of data mining in retail business, international conference on information Technology: coding and computing 2 (2) (2004) 455-459.

References:

Keywords: Insurance, Data mining, Hard fraud, Soft fraud, Financial fraud.


26. Information on http://arduno.co/en/Main/ardunoBoardUno


29. Information on http://blog.explainmydata.com/2012/07/

30. should-you-apply-pca-to-your-data.html

### Authors:
Kiran Kumar Kommineni, Adimulam Yesu Babu

### Paper Title:
A Cost-Benefit Model for an Enterprise Information Security

### Abstract:
A Cost-Benefit model for an enterprise information security is presented in this paper. ECONOMICAL analysis of information security investments that enterprises can use as guidance when applying the recommended risk mitigation plans are developed. An enterprises information security risk management associated with economical metrics. An economical analytical model is presented that enables the assessment of the necessary investment in the recommended information security. This model would be useful for both information security professionals and researchers in assessing the cost of the security measures versus the benefit of these measures in reducing the identified information security challenges.

### Keywords:
Cost Benefit Model; Enterprise; Information Security; Risk management.

### References:
16. 52

### Authors:
Lakhwinder kaur, Tejinder Thind

### Paper Title:
Lost of Pixel Recovery in Colored Images Using Neural Network

### Abstract:
As we know pixels are lost in colored images due to misfocus of devices, damaged devices, environmental condition and noise. So it is better to have good algorithm to get good quality of image even after de noising that using some algorithm. Many researchers are doing work in this field to recover pixel lost in given RGB image. We are going to present a noble approach for pixel recovery using neural networks to get better result as we know mean and median filter sometimes did not work well with images. Neural networks works on hidden number of layers in that so we use better number of hidden layers to find pixel to its most matching intensity.

### Keywords:
Colored images, Neural Network, pixel recovery

### References:
1. Yazeed A.Al-Shou Artificial neural network evaluation as an image denoising tool 2012 IDOSI Publications
2. Charu Khare and Kapil Nagwanshi Image restoration with non filter vol.39 February 2012
3. Kuo-Chang Liu Fragie water marking for color images using thersholding technique world academy of science, engineering and technology 68, 2012
5. Elhanan Elboher and Michael Werman Recovering color and details of clipped image region

Authors: Saiful Islam, Majidul Ahmed
Paper Title: A Study on Edge Detection Techniques for Natural Image Segmentation

Abstract: Natural image segmentation is one of the fundamental problems in image processing. Statistics of ‘natural images’ provides useful priors for solving under-constrained problems in Computer Vision. Image segmentation is the process of partitioning/subdividing an image into multiple meaningful regions or sets of pixels with respect to a particular application. Image segmentation is a critical and essential component of image analysis system. In literature, there are many image segmentation techniques. One of the most important techniques is Edge detection techniques for natural image segmentation. Edge detection is a fundamental tool for image segmentation. Edge detection methods transform original images into edge images benefits from the changes of grey tones in the image. In literature, there are many Edge detection techniques for image segmentation. In this paper, we used four Edge detection techniques for natural image segmentation and they are Roberts Edge detection, Sobel Edge detection, Prewitt Edge detection, and LoG Edge detection.

Keywords: Edge Detection Techniques, Image Segmentation, MATLAB

References:

Authors: Parameshachari B D, K M Sunjiv Soyjaudah, Sumithra Devi K A
Paper Title: Image Quality Assessment for Partial Encryption Using Modified Cyclic Bit Manipulation

Abstract: Measurement of image quality is important for many image processing applications. Image quality assessment is closely related to image similarity assessment in which quality is based on the differences (or similarity) between a degraded image and the original, unmodified image. There are two ways to measure image quality by subjective or objective assessment. Subjective evaluations are expensive and time-consuming. It is impossible to implement them into automatic real-time systems. Objective evaluations are automatic and mathematical defined algorithm. Subjective measurements can be used to validate the usefulness of objective measurements. Therefore objective methods have attracted more attentions in recent years. Well-known objective evaluation algorithms for measuring image quality include mean squared error (MSE), peak signal-to-noise ratio (PSNR), and structural similarity (SSIM). MSE & PSNR are very simple and easy to use. In this paper Image Quality Assessment for Partial Encryption Using Modified Cyclic Bit Manipulation. Proposed Partial Encryption algorithm based on the amount of encryption needed (i.e. percentage of encryption). Various objective evaluation algorithms for measuring image quality like Mean Squared Error (MSE), Peak Signal-To-Noise Ratio (PSNR) and Structural Similarity (SSIM) etc. will be studied and their results will be compared.

Keywords: Image Quality, MSE, PSNR,

References:
Authors: Rajashekarappa, K M Sunjiv Soyjaudah, Sunitra Devi K A

Paper Title: Study on Cryptanalysis of the Tiny Encryption Algorithm

Abstract: In this paper we present the Study on a Tiny Encryption Algorithm. There is a requirement to specify cryptographic strength in an objective manner rather than describing it using subjective descriptors such as weak, strong, acceptable etc. Such metrics are essential for describing the characteristics of cryptographic products and technologies. Towards this objective, we use two metrics called the Strict Plaintext Avalanche Criterion (SPAC) and the Strict Key Avalanche Criterion (SKAC) mentioned in our study that the strength of popular ciphers such as DES and TEA. A related issue of significance in the context of cryptographic applications is the quality of random number generators which need to pass certain tests. In this Paper, we expose DES and TEA to some of the standard random number generator tests. In this paper, we present the Study on a Tiny Encryption Algorithm. There is a requirement to specify cryptographic strength in an objective manner rather than describing it using subjective descriptors such as weak, strong, acceptable etc. Such metrics are essential for describing the characteristics of cryptographic products and technologies. Towards this objective, we use two metrics called the Strict Plaintext Avalanche Criterion (SPAC) and the Strict Key Avalanche Criterion (SKAC) mentioned in our study that the strength of popular ciphers such as DES and TEA. A related issue of significance in the context of cryptographic applications is the quality of random number generators which need to pass certain tests. In this Paper, we expose DES and TEA to some of the standard random number generator tests. In this paper, we present the Study on a Tiny Encryption Algorithm. There is a requirement to specify cryptographic strength in an objective manner rather than describing it using subjective descriptors such as weak, strong, acceptable etc. Such metrics are essential for describing the characteristics of cryptographic products and technologies. Towards this objective, we use two metrics called the Strict Plaintext Avalanche Criterion (SPAC) and the Strict Key Avalanche Criterion (SKAC) mentioned in our study that the strength of popular ciphers such as DES and TEA. A related issue of significance in the context of cryptographic applications is the quality of random number generators which need to pass certain tests. In this Paper, we expose DES and TEA to some of the standard random number generator tests.
Abstract: Due to a critical shortage of natural aggregate, the availability of demolished concrete for use as recycled coarse aggregate (RCA) is increasing. Use of waste concrete as RCA conserves natural aggregate, reduces the impact on landfills, save energy and can provide cost benefit. Recycled aggregates are the materials for the future. The application of recycled aggregate has been started in many Asian & Western countries for construction projects. Research Paper reports the basic strength properties of recycled coarse aggregate. It also compares these properties with natural aggregates. Basic changes in all aggregate properties were determined. Basic concrete properties like compressive strength, pull out strength is used to determine the maximum resistance of a concrete to axial loading of the concrete specimens that having different percentage of recycled aggregate replacement. The testing is just carried out after 28 days of casting. The resting specimen was 100mm diameter and 200 mm height for M25 grade concrete. There were total of six batches of concrete mixes, consists of every 20% increment of recycled aggregate replacement from 0% to 100%.

Keywords: recycled coarse aggregate (RCA), compressive strength, pull out strength.

References:

Authors: Chetna M Vyas, Darshana R Bhatt

Paper Title: Destructive Strength Properties of Recycled Coarse Aggregate

21. 92-94

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Abstract: The model developed by Springer and Tsai is extended using non-linear volume fraction in place of physical porosity for the effective thermal conductivity of composite materials with the help of local fractal techniques. The expression for non-linear volume fraction is obtained using data available in the literature. Present model is constructed in terms of fiber volume fraction, the fiber-matrix thermal conductivity ratio and the local fractal dimensions. The effective thermal conductivity ratio is evaluated using the model with the approximation of the fractal dimensions. These fractal dimensions [ and ] are considered to be equal in the absence of information about the arrangement of fibers in the composites. The technique of local fractal dimensions is used to reduce the geometric complexity of the fiber arrangements. Better agreement of predicted effective thermal conductivity values with experimental results is obtained. A comparison with other models is also done and found that our model predict the values of effective thermal conductivity quite well.

Keywords: Effective thermal conductivity, local fractal dimension, correction term, composite materials

References:

Authors: Rajpal Singh Bhopal, Pradeep Kumar Sharma, Ramvir Singh, Sajjan Kumar

Paper Title: Effective Thermal Conductivity of Polymer Composites Using Local Fractal Techniques

22. 95-100
Durable concrete is one that performs satisfactorily under the exposed environmental condition during its service life span. Concrete requires to little or zero maintenance and normal environment. Main characteristic influencing the durability of concrete is its permeability to the ingress of water. When excess water in concrete penetrates the concrete, it causes a decrease in strength and other properties, which in turns affects the durability of concrete. Durable concrete is one that performs satisfactorily under the exposed environmental condition during its service life span. Concrete requires to little or zero maintenance and normal environment. Main characteristic influencing the durability of concrete is its permeability to the ingress of water. When excess water in concrete penetrates the concrete, it causes a decrease in strength and other properties, which in turns affects the durability of concrete.
It evaporates, it leaves voids inside the concrete element creating capillaries which are directly related to the concrete porosity and permeability. By proper selection of ingredients and mix proportioning and following the good construction practices almost impervious concrete can be obtained. The flow of water through concrete is similar to flow through any porous body. The pores in cement paste consist of gel pores and capillary pores. The pores in concrete as a result of incomplete compaction are voids of larger size which give a honeycomb structure leading to concrete of low strength. There is a need for another type of test rather than the absorption test and permeability tests to measure the response of concrete to pressure. This test should measure the rate of absorption of water by capillary suction, “sorptivity” of unsaturated concrete. In this paper, an attempt is made to study the properties of Paper Industry Waste (Hypo Sludge) concrete to check durability. The mix design was carried out for M25 and M40 grade concrete as per IS: 10262-2009.

Keywords: durability, capillary suction, sorptivity, water absorption, hypo sludge concrete

References:

Keywords: Peaceocrete: Modern Material Partially Replaced with Cement in Mortar

Abstract:
Peaceocrete (P40, P60 and P100)a processed quality assured fly ash, investigated for its use as a partial replacement for cement in cement mortar (1:3). The utilization of Peaceocrete (P40, P60 and P100) as cement replacement material in mortar or as additive in cement introduces many benefits from economical, technical and environmental points of view. This paper presents the results of the cement mortar of mix proportion 1:3 which cement is partially replaced with Peaceocrete (P40, P60 and P100) at 0%, 10%, 30% and 50% by weight of cement. Four set of mixture proportions were made. First were control mix (without Peaceocrete (P40, P60 and P100) with regional fine aggregate (sand)) and the other mixes contained Peaceocrete (P40, P60 and P100) obtained from DIRK India Private Limited, Nashik, Maharashtra state. The compressive strength has been obtained with partial replacement of Peaceocrete (P40, P60 and P100) with cement. Test results indicate the decreases in the strength properties of mortar with Peaceocrete (P40, P60 and P100) for strength at 28 days as partial replacement with the cement in cement mortar 1:3. So it can be used in non-structural elements with the low range compressive strength where strength is not required and low cost temporary structure is prepared.

Keywords: Peaceocrete (P40, P60 and P100), Partial replacement, Compressive strength, Cement, Fine aggregate, Cost.

References:
4. IS 3812 (part-I) 1966 and part-II Indian standard code of practice on mortars. Indian standards Institution, New Delhi.

Authors: Rushabh A. Shah, Jayeshkumar Pitroda

Paper Title: Peaceocrete: Modern Material Partially Replaced with Cement in Mortar

Abstract: Now-a-days security has been a major issue where crime is increasing and everyone wants to take proper measures to prevent intrusions. Existing security systems are more towards providing passive security system, but this project is aimed at developing the security of home against intruders, fire and smoke. The main concern is home monitoring, appliances controlling, SMS notifications, sensors based alert system, door latches management from remote areas. Using this system, one can manage his home safely from remote places. One can see the present view of the home through the assigned site and can control home.

Keywords: Home security, intruder, monitoring, controlling, remote.
References:
4. Learning ASP.NET 3.5 by Jesse Liberty, Dan Hurwitz and Brian MacDonald. [O'Reilly publication]

Authors: B.Santhosh Vino, Dheepak Mohanraj, G.Gurumoorthy

Paper Title: DSP Based Performance Improvement for Horizontal Axis Wind Turbine Generator Model

Abstract: This proposed system focus on monitoring and testing of Horizontal axis wind turbine generator model employing parallel computing technique, Multicore CPU and LabVIEW graphical programming language. By using parallel computing techniques the computing time is faster than the sequential approach. The wind turbine generator performance improvement can be done by using DSP multicore controller and by employing parallel computing technique. The method of real time testing is done by Hardware-in-the-loop simulation. The generator output is monitoring using LabVIEW graphical programming language.

Keywords: Horizontal axis wind turbine model, Parallel computing, Lab VIEW, Digital Signal Processors DSP.

References:

Authors: S.Thangamari, M.S.Jayakumar

Paper Title: Smoothing the Performance of Hybrid System Output Power Using Fuzzy Wavelet Transform

Abstract: The battery energy storage system (BESS) is the current typical means of smoothing intermittent wind or solar power generation. In the present study a wind power generation system, PV generation system, and BESS hybrid power generation system were considered. Then, a fuzzy logic and wavelet transform based smoothing control strategy was proposed for instantaneous WP and PV power generations smoothing by on-line regulation of battery output power. The effectiveness of the proposed control strategy was verified using MATLAB/ SIMULINK software.

Keywords: wavelet transform, fuzzy control, wind/PV hybrid power system, battery energy storage system, intelligent smoothing Control

References:
Paper Title: Rebalancing the IT Equation with Cloud Computing to drive Business Agility

Abstract: Globalized world of the twenty-first century has made the world flat. Radical “nonlinear change” which brings about a different order is becoming more frequent. Furthermore the pace of change is significantly more rapid. Business networks have become more complex and interwoven. In different industries we witness large differences between the ability of firms to sense highly uncertain and unexpected events and swiftly respond by changing businesses and business processes. Technology innovation, long-term public policy shifts and deregulation are destabilizing the business landscape and reshaping the world in which we live. In particular, the Internet as a communication and transaction infrastructure has led (and will lead) to turbulence and uncertainty in the business and consumer markets. To succeed in this competitive and fast-changing world, businesses need to be more agile and responsive, and they need to keep costs to a minimum. Cloud computing addresses all of these points: agility, responsiveness, cost.

Keywords: Cloud Computing, Agility, Business Agility, IT Agility, Cost-Agility Equation.

References:

Authors: Yuvraj Singh Gurjar, Vijay Singh Rathore

Authors: Udhayakumar P, Saravanaan C, Lydia M
### 1. Stand - Alone Wind Energy Supply System Using Permanent Magnet Synchronous Generator

**Abstract:** Energy demand across the world is increasing and the resources are becoming scarce. The major source of power is from the conventional sources only. Some of the conventional sources of energies like thermal energy is produced from the fossil fuel coal which are depleting and is only limited to 2030. Renewable sources of energies are Solar, Wind, Biomass, etc hold bright prospect for the future. Wind industry has made rapid strides in the recent years. Wind power penetration has increased significantly in many interconnected power systems. Wind farms in remote places can also serve as stand – alone wind energy supply system. In this paper simulation of stand – alone wind energy supply system using permanent magnet synchronous generator is done.

**Keywords:** Permanent Magnet Synchronous Generator, Rectifier, Boost Converter, Voltage Source, PWM Inverter, Lead – Acid Battery.

**References:**


**Authors:** Deepak B. Nagare, Kishor L. More, Nitin S. Tanwar, S.S.Kulkarni, Kalyan C. Gunda

### 2. Dynamic Carpooling Application Development on Android Platform

**Abstract:** In today’s world, there are lots of people commuting from place to place. Example: employees going back home. Students going home from university etc. And lot of times, people will be commuting via car or bike and there is place to take a fellow employee along with him to give a ride. But the problem is there is no easy way to know how many people a person can take and co-ordination is a huge issue that there is no effort by people to help each other by giving a lift and more over this saves the environment in reducing fuel usage, reduces traffic with fewer vehicles etc. The Carpool is an android application which will provide the advanced searching techniques and provide most relevant results for the carpooling in the city. This will be helpful in easy way Carpooling reduces the costs involved in repetitive or long distance driving by sharing cars, sharing rental charges, or paying the main car owner. Some countries have introduced high-occupancy vehicle (HOV) lanes to encourage carpooling and use of public transport, to combat rising traffic congestion [1].

**Keywords:** Car Owner, Ride Seeker, Pickup and Drop-Off points, HOV [high-occupancy vehicle], OV [Origin & Destination]

**References:**

4. Yunfei Hou, Xu Li, IEEE Member, and Chunning Qiao, IEEE Fellow,TicTac: From Transfer-Incapable Carpooling to Transfer-Allowed Carpooling,Globecom 2012- Ad Hoc and Networking Symposium.
7. Martin Savelisberg, Sustainable Passenger Transportation: Dynamic Ride-sharing, TRANSLOG,December 9, Chile.
9. Paul Resnick, Associate Professor,University of Michigan, School of Information, SocioTechnical Support for Ride Sharing.
11. Gonçalo CORREIA1, José Manuel VIEGAS2,CAR POOLING CLUBS: SOLUTION FOR THE AFFILIATION PROBLEM IN TRADITIONAL/DYNAMIC RIDESHARING SYSTEMS. Advanced OR and AI Methods in Transportation.

**Authors:** M.Mohemmed Sha, K.Vivekanandan

### 3. Selection of Web Services Based on Provider’s Reputation

**Abstract:** Web services are being considered an excellent tool to solve distributed computing challenges in business integration. Business-to-business integration has become a critical issue as organizations find a greater need to consistently interact with new partners in a global business environment. Picking a service of an organization from the services having similar properties, capabilities, interfaces, and effects is a difficult task and necessitates the use of an intelligent decision making system. So the quality related aspects are also considered for the selection of a best service. Measuring the QoS of a web services for a customer is not an easy task. Selection based on Non- Functional parameters is always be a wrong choice because of false projection and advertisement by the service providers. Here, the challenge is to check the actual reputation for the service provider. In this paper, we are proposing a method to
measure the actual reputation of a services provider by considering various reputation measures of few reputed service providers.

**Keywords:** Web Service, Service Provider, QoS, Reputation

**References:**


**Authors:** Nikhil Sharma, Niharika Mehta

**Paper Title:** Advanced Speech Compression VIA Voice Excited Linear Predictive Coding Using Discrete Cosine Transform (DCT)

**Abstract:** One of the most powerful speech analysis techniques is the method of linear predictive analysis. This method has become the predominant technique for representing speech for low bit rate transmission or storage. The importance of this method lies both in its ability to provide extremely accurate estimates of the speech parameters and in its relative speed of computation. The basic idea behind linear predictive analysis is that the speech sample can be approximated as a linear combination of past samples. The linear predictor model provides a robust, reliable and accurate method for estimating parameters that characterize the linear, time varying system. In this project, we implement a voice excited LPC vocoder for low bit rate speech compression.

**Keywords:** Autocorrelation, Discrete Cosine Transform, Levinson Durbin Recursion, Linear predictive coding (LPC).

**References:**


5. Speech coding. a tutorial review by Andres s. Spanias member IEEE.


**Authors:** Harikrishna Yadav. Nanganuru, Enzo Polambo

**Paper Title:** Determination of Sulphhydryl and Disulphide Groups in Lysozyme

**Abstract:** Proteins contain several actual or potential sulphhydryl groups. These groups are very important for cellular respiration. A remarkable method of altering many proteins is to dissolve them in urea or other amide solutions. When a protein is partially denatured, that means only part of it is converted into a form insoluble under conditions under which the native protein is soluble, the insoluble fraction has the number of reactive SH and S-S groups characteristic of completely denatured protein, whereas the soluble fraction has the number characteristic of protein which has not been denatured at all. Finally, when a protein is converted by urea into a form which has an increased number of S-S groups, that form is insoluble in a medium in which native protein is soluble. In denaturation, formation of insoluble protein and increase in detectable SH and S-S groups are closely related aspect. The sulphide groups in the protein with DTNB in the tubes of 1, 2 and 3 having 1.365mole, 6.58mole and 0.158 moles respectively. Disulphide fluorescence quenching assay gives the number of moles of disulphide groups per mole of protein of the lysozyme was 10.4nmoles.

**Keywords:** Lysozyme, Cary Eclipse, Fluorescence Quenching Assay and Bovine Serum Albumin.

**References:**


Authors: 
Dinesh Verma, Monika Kalra

Paper Title: 
Free Convection MHD Flow past a Vertical Plate with Constant Suction

Abstract: 
The special effects of fluctuating gravitational field on free convection MHD flow past a homogeneously moving infinite erect porous plate with constant suction velocity in a porous medium have been analyzed. A constant heat flux is prearranged on the plate. The gravitational field is implicit in the form . The governing equations are solved by perturbation method. Fluid velocity and fluid temperature shows remarkable alter with alteration in gravitational field. Small increase in gravity modulation parameter shows considerable increase in amplitude of skin friction and has insignificant decreasing effect on phase of skin friction.

Keywords: MHD, porous media, free convection, suction, unsteady, skin friction, Gravity modulation.

References: 

Authors: 
Bikash Sarkar, B.B.Sahu, B.C.Mohapatra, N.K.Barik, D.Majhi, P. Jayasankar, P.R.Bhatnagar

Paper Title: 
Design and Development of an Innovative Mobile Fish Vending Unit for Retailers

Abstract: 
The purpose of this study was to design and develop a low cost mobile fish vending unit in urban/municipality areas with proper waste disposal. The prototype model was designed and fabricated using locally available materials at a cost of Rs.52780/-. The main feature of this prototype is that its 100 and 70 L insulated chilled crates; utility box; Cutting and processing area; storage of water and waste disposal. Necessary effort has been made to maintain the possible market quality of fish and fish products in the form of raw and semi-processed/processed chilled products. Test trial of ergonomics evaluation indicated that the working heart rate (HR work) of the male operator ranged from 123.8 to 134 beats/min with a mean value of 131.9 ± 1.6 beats/min. The corresponding values to women were 119.0 to 149.6 and 131.2 ± 1.0 beats/min, respectively. The heart rate was lower with male as compared to the female. The forces on the pedal are 161.84 N and 377.6 N in case of first and second condition. The forces on the pedal are 161.84 N and 377.6 N in case of first and second condition. The calculated mechanical advantages for first and second condition are 0.278 and 0.276, respectively.

Keywords: Human powered utility vehicle (HPUV), Fishvending, FishHygiene, Fish retailers; Value added fish products, Rolling and Gradient resistance.

References: 
2. S. K. Bhowmik and D. Saha, Street Vending in Ten Cities in India, School of Management and Labour Studies, Tata Institute of Social Sciences Deonar, Mumbai 400 088, For National Association of Street Vendors of India, Delhi,2002.
36. **Authors:** Arvind Dewangan, D.P.Gupta, R.K.Bakshi, Ram K. Manchiryal  
**Paper Title:** Stress Distribution Analysis of the Kaolinite Layer at the Kaolinite –Geotextile  
**Abstract:** The analysis of stress within a body implies the determination at each point of the body of the magnitudes of nine stress components. In other words, it is the determination of the internal distribution of stresses. An alternative method used in stress analysis is the determination of the internal distribution of strains. The differences between kaolinite and smectite structures are notable, mainly as a result of the degree of weathering in the different compounds. Nevertheless, the kaolinite structure possesses great advantages in many processes due to its high chemical stability and low expansion coefficient. Bearing capacity factors are available in the literature for estimation of the load-carrying capacity of unreinforced and reinforced unpaved roads, i.e. for soil layers with a granular fill overlaying soft soil. This paper present the the stress distribution on the kaolinite layer at the kaolinite-geotextile or kaolinitefurnace ash interface, it measured with increases in footing pressure in order to assess the load dispersion angle over the soil layer. The predicted load dispersion angle is then used to estimate the bearing capacity factors of the soil layer with increases in footing deformation. This paper also focus typical vertical stress distributions measured below the interface (on the top surface of the kaolin layer) for a fill thickness of 110 mm with different footing pressures.  

37. **Authors:** Bharti, Tejinder Thind  
**Paper Title:** Background Subtraction Techniques-Review  
**Abstract:** Background subtraction approach is used to detect the moving object from background. Different methods have been proposed to detect object motion by using different background subtraction techniques over recent years. Each technique has its own benefits and limitations such as some techniques can only applied for static background and some for dynamic backgrounds. This paper provides review of main methods used to detect foreground object with its merits and demerits. It would help the researchers to select the most appropriate technique according to the application.  
**Keywords:** Background subtraction, Gaussian mixture model, Region based, pixel based  

38. **Authors:** Gurleen Singh, Sakshi Sharma, Prabhdeep Singh  
**Paper Title:** Design and Develop a Honeypot for Small Scale Organization  
**Abstract:** Computer Network and Internet is growing every day. Computer networks allow communicating faster than any other facilities. These networks allow the user to access local and remote databases. It is impossible to protect every system on the network. In industries, the network and its security are important issues, as a breach in the system can cause major problems. Intrusion detection system (IDS) is used for monitoring the processes on a system or a network for examining the threats and alerts the administrator about attack. And IDS provide a solution only for the large scale industries, but there is no solution for the small scale industries so model is proposed for honeypot to solve the problem of small scale industries which is the hybrid structure of Snort, Nmap, Xprobe2, P0f. This model captures the activities of attackers and maintains a log for all these activities. Virtualization is performed with the help of virtual machine. The focus of this paper is primarily on preventing the attacks from external and internal attackers and maintaining the log file using honeypot with virtual machine.  
**Keywords:** Intrusion detection system, honeypots, attacker, security.  
Abstract: To evaluate the groundwater quality for irrigational purposes in Cumbum Valley, Theni District, Tamil Nadu covering a total area of about 1485.62 km² 55 groundwater samples was collected from dug and bore wells in the various locations of study area. The samples were analyzed for physico-chemical and calculated parameters viz., Ca²⁺, Mg²⁺, Na⁺, K⁺, CO₃⁻, HCO₃⁻, Cl⁻, SO₄⁻ and Kelley’s ratio, SAR values, Mg-hazards, RSC have been worked out to know the suitability of the groundwater quality for irrigational purpose. Majority of the hydrochemical facies were identified using Piper trilinear diagram. It reveals that the subsurface water is alkaline earth (Ca+Mg) then alkales (Na+K) type. The groundwater samples fall under class-I based on Doneen’s classification and good to permissible category in the Wilcox classification. According to the SAR values plotted in the US Salinity diagram, most of the groundwater samples belong to C3-S1 (41.82%) class indicating high salinity and low sodium water, which can be used for almost all types of soil with little danger of exchangeable sodium that the groundwater could be used for all types of crops on soils of medium to high permeability.

Keywords: Cumbum Valley, Doneen’s diagram, Irrigational, , Wilcox diagram US Salinity Laboratory diagram.)

References:

Authors: R. Ayyandurai, M. Suresh, S. Venkateswaran
Paper Title: Evaluation of Groundwater for Irrigational Purposes in Cumbum Valley Theni District Tamilnadu India

40.

175-182

41.

183-186

**Authors:** Amandeep Kaur, Puneet Bhardwaj, Naveen Kumar

**Paper Title:** FPGA Implementation of Efficient Hardware for the Advanced Encryption Standard

**Abstract:** We present an efficient hardware architecture design & implementation of Advanced Encryption Standard (AES) – Rijndael cryptosystem. The AES algorithm defined by the National Institute of Standard and Technology (NIST) of United States has been widely accepted. All the cryptographic algorithms developed can be implemented with software or built with pure hardware. However with the help of Field Programmable Gate Arrays (FPGA) we tend to find expeditious solution and which can be easily upgraded to integrateanay concordat changes. This contribution investigates the AES encryption and decryption cryptosystem with regard to FPGA and Very High Speed Integrated Circuit Hardware Description language (VHDL). Optimized and Synthesizable VHDL code is developed for the implementation of both 128-bit data encryption and decryption process. Xilinx ISE 10.1 software is used for simulation. Each program is tested with some of the sample vectors provided by NIST and output results are perfect with minimal delay. The synthesis results found from FPGA implementation by Xilinx Synthesis Tool on Virtex II pro kit shows that the computation time for generating the ciphertext by AES with 4 sbox and 2 dual port RAM is 6.922 ns.

**Keywords:** Cryptography, Advanced Encryption Standard, Rijndael, S-box, key expansion, cipher text.

**References:**
8. K. Gaj and P. Chodowiec, Comparison of the hardware performance of the AES candidates using reconfigurable hardware, inThe Third AES Candidates Conference, printed by the National Institute of Standards and Technology.

**Authors:** P. Palpandian, R. Jayagopal

**Paper Title:** Geochemical Studies in Edapatty Puthur Village, Salem District, Tamil Nadu, India

**Abstract:** Edapatty is a small village in Attur taluk of Salem District in Tamil Nadu. To understand groundwater quality for pre and post-monsoon period, the pre-monsoon season over exploitation of groundwater leads to water level decreases. Thus the main objective of this study is to give an account of the hydrogeochemistry of the region, to trace the sourced of principal chemical constituents, their concentration and effects on utility. As a result, groundwater becomes very hard. In order to bring out the various physical and chemical characteristics of the groundwater in the study area, twenty four representative groundwater samples were collected from various location of the study area and analysed for various parameters and the result were reported in this project to arrive at a possible solution. After heavy rainfall from NE and SW Monsoon, the total hardness of the water decrease and get diluted due to infiltration. It leaches some chemical constituents, which are derived from fertilizers like Gypsum and Sulphate fertilizers used by farmers for the agriculture. It leads to concentration of Na, K and SO4 in groundwater. After precipitation, Ca, Mg and Cl concentration decreases. It may be due to dilution of these elements by the percolation of water.

**Keywords:** Hydro geochemistry, Groundwater, Fertilizer, Precipitation.

**References:**
3. (Divya) Impact of chemical fertilizers on water quality in selected agricultural areas of Mysore district, Karnataka, India. INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCES Volume 2, No 3, 2012.

191-195
Proteins perform a vast array of functions within living organisms, including catalyzing metabolic reactions, replicating DNA, responding to stimuli, and transporting molecules from one location to another. Proteins differ from one another primarily in their sequence of amino acids, which is dictated by the sequence of their genes, and which usually results in folding of the protein into a specific three-dimensional structure that determines its activity. Proteins are the most multifaceted macromolecules in living systems and have various important functions, including structural, catalytic, sensory, and regulatory functions. Rational design of enzymes is a great challenge to our understanding of protein structure and physical chemistry and has numerous potential applications. Protein design algorithms have been applied to design or engineer proteins that fold, fold faster, catalyze, catalyze faster, signal, and adopt preferred conformational states. The field of de novo protein design, although only a few decades old, is beginning to produce exciting results. Developments in this field are already having a significant impact on biotechnology and chemical biology. The application of powerful computational methods for functional protein design has recently succeeded at engineering target activities. Here, we review recently reported de novo biotechnology and chemical biology. The application of powerful computational methods for functional protein design has recently succeeded at engineering target activities. Here, we review recently reported de novo

Authors: R.Venkatachalapathy, P. Karthikeyan
Paper Title: Benthic Diatoms in River Influenced By Urban Pollution, Bhavani Region, Cauvery River, South India

Abstract: The present-day study assesses diatom communities in river with relation to environmental conditions. Diatoms are susceptible to environmental conditions in river and their distribution is mainly governed by the physicochemical composition of the water. Diatoms and water samples were collected in 5 locations during summer season (May 2012). Analysed data were interpreted and the results are represented. Four statistical methods were used in this study, Cluster analysis, Canonical correspondence analysis (CCA), Principal component analysis (PCA) and Detrended correspondence analysis (DCA) were determined the species distribution and environmental gradients along polluted and unpolluted area with physical and chemical variables. A total of 37 diatom species distributed among 17 genera were recorded. The significance of water quality difference among the sampling sites was expressed by four strastical methods. Highly polluted water contain diatom species like Pleurosigma salinarum, Nitzschia thermalis, Gomphonema parvulum, Gomponema lanceolatum, Fragilaria intermedia in the densely populated and highly industrialized locations and slightly polluted water present the diatom species like Achnanthes minutissimmi Kutz, Cyclotella catenata and Cymbella tumida among sampling sites.

Keywords: Diatom, Statistical method, Polluted water.

References:
3. T. Bere, Epipsmmic diatoms in streams influenced by urban pollution, São Carlos, SP, Brazil. 2010, Brazil. J. Biol. vol. 70, no. 4, p. 921-930.
7. C. Facca, Epipelic diatom spatial and temporal distribution and relationship with the main environmental parameters in coastal waters, Estuarine, Coastal and Shelf Science. 75: 35–49. 2007.

Authors: Atul S. Joshi, P.R.Deshmukh
Paper Title: Hamming Distance Polygram Substitution Algorithm for Coding Optimization & Security

Abstract: The joint approach of integrating selective encryption & coding optimization is presented in this paper. Binary bit stream of the input is divided into the plaintext chunk of 64 bits. Random Key of 128 bits is generated. Key bits are then selected randomly. These randomly selected bits are change again randomly according to plaintext bits. Hamming distance is calculated in between the plaintext & changed key bits. Based on this Hamming distance codebook is form. Index of the codeword is treated as a cipher text which is itself a compressed code. Two levels of encryption is achieved in this work which makes the algorithm more secured than other encryption algorithm. The proposed algorithm is compared for standard test image on the basis compression performance & computational complexity. The result taken shows better performance of the proposed method over other standard methods.

Keywords: Hamming distance, Polygram substitution, Key, Encryption, Compression.

References:
Generating More Reusable Components while Development: A Technique

Abstract: The Component Based Software Development (CBSD) is increasingly being adopted for software development. This approach uses reusable components as building blocks for constructing software systems. The main advantages of CBSD are reduced development time, cost and efforts along with many others. The advantages are mainly provided by the reuse of already built-in software components. But there are many factors that affect the reusability of a component across many applications. Some factors can be resolved during the development of the component to make component more reusable. In this paper, some factors that affect the component reusability have been discussed with the techniques to resolve those factors. Thus a technique has been proposed for Software Component Development Organizations (SCDO) to be used while developing the components in order to generate more reusable component.

Keywords: CBSD, Component, Reusability, SDCO.

References:
6. SONG Cui-Ye, DU Cheng-Lie, “Formal Interface-Component Based SoftwareAnalysis and Design”, School of Computer Science and
Authors: Ankita Desai, Rachana Oza, Pratik Sharma, Bhautik Patel

Paper Title: Hypervisor: A Survey on Concepts and Taxonomy

Abstract: Because of the advancement of VLSI technology and aggregate throughput of all devices of servers, we are having tremendous computing power which could not be utilized either 100% or optimized way. Virtualization technique has solved this problem by providing proper utilization of hardware resources. Virtualization refers to the abstraction of computer resources. It separates user and applications from the specific hardware characteristics they use to perform their task and thus creates virtual environment. The purpose of creating virtual environment is to improve resource utilization by aggregating heterogeneous and autonomous resources. This can be provided by adding a layer called HYPERVISOR between OS and underlying hardware. There are many market players who have launched the hypervisor. This paper mentions architectural specification of each hypervisor followed by common characteristics that each hypervisor poses.

Keywords: AMD, Cloud Computing, Hypervisor, Intel VT-x, Virtualization.

References:

Authors: Deepali Varman, Gargi Mandal, Nidhi Beniwal, Saloni Talwar

Paper Title: Dynamic Data Aggregation Tree for Data Gathering in Wireless Sensor Network

Abstract: Energy efficiency is the most important issue in all facets of wireless sensor networks (WSNs) operations because of the limited and non-replenishable energy supply. Data aggregation mechanism is one of the possible solutions to prolong the life time of sensor nodes and on the other hand it also helps in eliminating the data redundancy and improving the accuracy of information gathering, is essential for WSNs. Thus we can say that a key challenging question in Wireless Sensor Network is to schedule nodes activities to reduce energy consumption. In this paper we propose a Dynamic Data Aggregation Tree Algorithm (DDAT) in which we create aggregation tree which aim to reduce energy consumption, minimizing the distance traversed and minimizing the cost in terms of energy consumption. In DDAT the node having maximum available energy is used as parent node/aggregator node. We concluded with the best possible aggregation tree minimizing energy utilization, minimizing cost and hence maximizing network lifetime.

Keywords: Aggregation, Energy, Cost, Distance.

References:

Authors: Dianguima Diarroso, Mamadou Saliou Diallo, Amadou Dia, Ousmane Sow, Idriissa Gaye, Fabé Idrissa Barro, Grégoire Sissoko

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226-230
Abstract: This work present the development of a battery charge/discharge regulator for photovoltaic systems. The system is designed to operate at 12V and accept solar panel up to 100W. The charge/discharge regulator is an analog one with protections respectively against battery deep discharge and overcharge, thermal drift, short circuit and polarity inversion. The proposed regulator has been realized and tested in a solar home system (SHS) composed with AC lamps and DC/AC inverter.

Keywords: Battery, charge/discharge, regulator, SHS.

References: