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Title: Performance analysis of a vertical well with a finite-conductivity fracture in gas composite reservoirs

Author (s): Yu Long Zhao, Freddy Humberto Escobar, Claudia Marcela Hernandez and Chao Ping Zhang

Abstract: It is well known that hydraulic fracturing can efficiently be applied to develop both low permeability and unconventional gas reservoir. Sometimes, the formations cannot be fully fractured and, then, the resulting fracture does not end up with infinite conductivity. Besides, for either tight or unconventional gas reservoir, a fracture network will be developed around the well during the fracturing process. This paper presents a semi-analytical model governing fluid flow in porous material for a finite-conductivity-fractured well in a composite gas reservoir, considering the fractures as either partially or fully penetrated. By nature, a fracture-network system around the well is always induced in tight gas formations, then, a composite model with inner dual-porosity to describe stimulated reservoir volume is established. Solutions for both constant-production rate and constant-bottom hole pressure are obtained by using the point-source function and the Laplace transformation techniques which are used along with the Stehfest algorithm to obtain the numerical inversion of the pressure and rate variables. The pressure-time and rate-time behaviors are then analyzed by careful observation to both transient-pressure and the rate-decline type curves. The models and type curves introduced in this work possess both theoretical and practical valuable application in the field of well test interpretation for the system under consideration.

Full Text

Title: Intelligent parking by merging cloud and sensors

Author (s): N. V. Rajeesh Kumar, R. Kamala Kannan and R. Madhan Kumar

Abstract: The aim of the project is to develop an Internet of Things (IOT). We propose Internet of Vehicles (IoV) by the combination of sensors and microcontrollers in the vehicles and cloud server to form an intelligent vehicle parking slot booking system. In this, Sensor will measure physical characteristics of the vehicle and converts them to digital signals and the microcontroller will handles the operations of electrical systems and processing. In the recent world, number of vehicles has been increased and so, the increasing amount of information requests thrown by vehicles cannot be managed by a traditional roadside unit (RSU) which is responsible to respond. Therefore, we introduced cloud which plays a major role in providing efficient services. We process the requests in our web applications hosted in the cloud.

Full Text

Title: Study of change in the SCM's strength properties depending on the aqueous-clay suspension's concentration and muscovite's amount in its composition

Author (s): Yuriev Pavel O., Lesiva Elena M., Bezrukikh Alexander I., Belyaev Sergey V., Gubanov Ivan Yu., Kirko Vladimir I. and Koptseva Natalia P.

Abstract: This article represents the results of the study of change in aqueous clay suspensions' (ACS) electrostatic properties depending on muscovite's concentration in their composition. The influence of ACS' concentration and muscovite's varied amounts in the composition of mechanically activated bentonite clay (Chernogorskoe field) used as a coupling agent in molding sand mixtures for steel and cast iron casting, on the mixture's strength properties has been studied. The increase in the sand-clay mixture's (SCM) strength properties and gas permeability depending on the ACS's and muscovite's concentration has been established.

Full Text

Title: Prominent speed arithmetic unit architecture for proficient ALU

Author (s): R. Rashvenee, D. Roshini Keerthana, T. Ravi and P. Umarani

Abstract: ALU is one of the most important unit of processor. The computing efficiency of the processor depends on the competency of the ALU. ALU unit performs the arithmetic and logical operations. The adder and multiplier are the main computational units of the arithmetic unit. The performance factors such as delay, power and area. Parallel prefix adders have better delay performance; it involves the execution of the operation in parallel. Brent Kung adder is the most area and power efficient parallel prefix adder. In this paper we proposed high speed Brent Kung adder which consists of Urdhava Tiryakbhyam sutra based Vedic multiplier. In the conventional multiplier speed is restricted by the adders used for partial products. The proposed multiplier is used in the arithmetic unit of an ALU shows better performance in terms of delay. The proposed arithmetic architecture is designed, evaluated and implemented in Xilinx FPGA.

Full Text

Title: Study of distance-based Outlier Detection

Author (s): Pritam Pramanik, Rahul Singh and Sathyabama R.

Abstract: The classic k-NN technique is widely used for observing density of each outlier which will be able to notify the detected ways i.e., fast reverse nearest Neighbors search regarding each outlier which include high dimensions, hubness, antihubs, outliers and unattended outlier. The distinction between unsupervised and supervised outlier detection can apprise solely the closest Fast Nearest Neighbors Search with variety of nodes between them on the opposite hand unsupervised Detection filter Fast Nearest Neighbors Search relating to distance and can detect and list out every of the closest neighbors. Our technique supplies proof that demonstrating that distance-based ways in which can prove further contrastive scores in Big-dimensional settings. The property has a definite impact, by examining the fast distance resulting outliers. Artificial and in real- world knowledge sets, offers better sets of objective which may list out Fast Nearest Neighbors Search based on Unsupervised based Outlier Detection.

Full Text

Title: Circular monopole slotted antenna with FSS for high gain applications

Author (s): B. T. P. Madhav, A. V. Chaitanya, R. Jayaprada and M. Pavani

Abstract: A coplanar waveguide feel wideband antennas are designed with slots on the radiating element and stubs on ground plane. Proposed model 1 exhibiting notch band characteristics at desired frequencies (3.5-4.5 GHz, 7.5-8 GHz) and model 2 is designed to operate in the ultra-wide band region. To enhance the gain characteristics of the proposed models incorporated a mushroom structured like frequency selective surface as reflecting device beneath the antenna structure. By placing FSS structure a stable gain of 7dB is attained from model 1 and 5dB in model 2. The experimental results of the proposed wide band antenna of model 1 are in good correlation with the simulated results from HFSS.

Full Text

Title: Model validation for temperature profile inside FFB during sterilization for palm oil mill process

Author (s): Arif bin Ab Hadi, Dato Ir. Abd. Wahab Mohammad and Ir. Mohd Sobri Takriff

Abstract: The purpose of a developing a reliable and accurate spreadsheet modeling tools was in order to investigate heat transfer efficiency inside mill sterilizer cage by predicting the temperature profile inside FFB at various locations inside the cage. The model was previously validated based on Mongana Report, Chan SY and Ang et al suggested that the model was best predicted by the experimental data which was taken from experimentally determined data of Ang et al, based on 15kg bunch at sterilization time of 1 hour (3600s) with the thermocouple inserted into a hole drilled near or beside stalk. In this study, an experiment was conducted to investigate the temperature profile inside FFB based on different FFB weights (12kg, 15kg and 18kg) by using temperature sensor probe inserted into a drilled hole beside FFB stalk and inside the stalk. The result suggest that temperature profile located at near or beside the stalk was best represented as the temperature profile located at the center of FFB as per validated result with Ang et al, with the smallest percentage error in the range of 0.31-5.82% for all FFB weight (12kg, 15kg and 18kg).

Full Text

Title: Content image detail enhancement on wavelet analysis using satellite and medical images

Author (s): Kalyan Babu Ch., Karthick C. and Satish Kumar V. H. N. S.

Abstract: To Improve Image Quality on Contrast and Sharpness using Wavelet based smoothness and gradient operator on Image Enhancement. Detail enhancement is required by lot of problems in the fields of computational photography and image processing. In Existing Method on Smoothing and gradient operator algorithm reduce color deformation in the detail-improved image, especially around pointed edges. In our proposed method we implement on Wavelet using with smoothness for contrast enhancement and gradient operator on color image sharpness enhancement. Then visibility refurbishment component utilize average color difference standards and enhanced sharpen and contrast on image with improved feature. Finally the simulated result shows that enhanced detail image.

Full Text

Title: Validation of the Grader's ability using measurement system analysis

Author (s): Ivan Gunawan and Dwi Agustin Nuriani Sirodj

Abstract: Quality control is one of the important thing for the company in maintaining consistency of product quality. Time always becomes a technical problem that often occur in quality control process while we are measuring quality characteristics with specific device. So, it can make the analysis and decision be late because it is not in accordance with the operational needs. Upgrading or adding a number of specific devices is not a wise solution because the impact is significant increase in the cost of quality. More efficient way for the company to reduce the quality cost is to develop human resource with particular sensory sensitivity to be a Grader. On the one hand the using of human labor as Grader is a practical solution in order to reduce the cost of quality, but on the other hand would cause a problem of trust between suppliers and companies (as customers). Grader often considered subjectively in providing an assessment of the characteristics of quality for the materials supplied by the supplier. Some methods in MSA as Gage R&R and Gage Linearity and Bias Study will be applied to validate Grader's ability in assessing the quality characteristics. The results of the study showed that the gage R&R not only can validate the Grader's ability but also detect when needed improvement for the measurement system in assessing the quality characteristics.

Full Text

Title: Speed control of induction motor without speed sensor at low speed operations

Author (s): Akshay Prasad Dubey and Saravana Kumar R.

Abstract: This paper represents the control strategy for the speed control of induction motor without using any feedback position sensor. The system uses speed, torque and current loops to estimate the actual speed of the motor and to generate the six pulses according to the error signal between the reference speed and the estimated speed. Six pulses are given to the real time inverter which is supplying AC source to the motor. The change in characteristics of the pulses changes the speed of the induction motor. The hardware setup is made by interfacing between the MATLAB simulink model and the field sensors and the inverter. The proposed system is simulated in the MATLAB/ Simulink, also the system is dumped into the dSpace System and Arduino Board to generate the required six pulses for the six bridge inverter. These pulses are given to the inverter. Thus, the speed of the system is controlled without using the position sensor. This system is mainly proposed to reduce the cost of the system by eliminating the use of position feedback sensor by the current and voltage sensors. This system is having high accuracy, less cost, less complexity and weight of the system and it is highly reliable and efficient system.

Full Text

Title: Digital branding: An empirical study with special reference to E-commerce startups

Author (s): Brijesh Sivathanu

Abstract: Advent of new technology, media and tools are rapidly reshaping the traditional ways of branding. Branding is the challenge for any of the e-commerce startups. This paper aims to highlight the digital branding practices of e-commerce startups and study its impact on the consumer buying behavior. A primary survey was conducted in Pune city using a structured questionnaire among 380 consumers who have purchased online. The exploratory factor analysis technique was deployed to identify the antecedents contributing to the digital branding of the e-commerce startups. Multiple Linear regression technique was used to understand the impact of the digital branding practices of the e-commerce startups on the consumer buying behavior. The results and findings clearly show that there exists a significant impact of the digital branding practices on the consumer buying behavior. This study attempts to interweave the disciplines of digital branding and consumer buying behavior, a crucial activity for the survival of e-commerce startups, given their lack of resources, financial cost constraints and the fundamental need to find and maintain clients. The significant contribution of this paper is that it provides a basis for conceptualizing a model of digital branding practices for the e-commerce startup firms performing under dynamic and competitive global environments.

Full Text

Title: Novel approach of Data Reconciliation in cement mill for kernel PCR algorithm

Author (s): B. Dinesh Kumar, M. Guruprasath and Komanapalli Venkata Lakshmi Narayana

Abstract: The quality of finished product of a cement mill is measured in terms of blaine, which is the measure of specific area of cement. Normally blaine is measured offline and maintaining the blaine is very important because it directly hampers the cement strength and also affects production cost. A soft sensor based kernel autoregressive exogenous model (ARX) was developed to predict the blaine quality for a defined sampling period to be used in a controller. ARX model includes the past blaine predictions as regressors in addition to the other informative variables in order to predict the blaine. The quality of predictions is largely dependent on data; the construction of data to be used in the algorithm requires good process understanding as the raw data collected from the process will have many information that can mislead the prediction. This means the information may cause over fitting or sometimes reverse modeling because of excess information. In this paper, an automatic method to align data based on the process characteristics to be fed into the algorithm for improving the prediction based on data reconciliation method is proposed. Data Reconciliation (DR) is a technology that uses process information (input data's) and mathematical model to automatically align the variables according to the dynamics of the industrial processes.

Full Text

Title: Optimization of spatial data sample for gold mineral prediction

Author (s): Nur Ali Amri, Abdul Aziz Jemain and Ahmad Fudholi

Abstract: This study examines the relationship between the results of semivariogram fitting conformity with estimating based on errors produced. The experimental semivariogram estimation was calculated using robust methods, while the theoretical semivariogram function used are spherical and exponential models, with weighted least squares and ordinary least squares approaches. Consistently, the four semivariogram fittings produce root mean square error (RMSE) fluctuates, while the values are proportionally to the median absolute deviation (MAD) generated by ordinary kriging.

Full Text

Title: Calculated characteristics of a prototype model of beam recirculation in a linear accelerator with standing wave

Author (s): Aleksandr Evgenevich Novozhilov, Aleksandr Nikolaevich Filatov and Vladimir Kuzmich Shilov

Abstract: In this paper we discuss the justification of a beam recirculation scheme in a prototype model of an accelerator with standing wave, the justification of a calculation method for bending magnets and the choice of their geometry, the calculation of the radial and longitudinal dynamics of particles in a system with beam recirculation, and the influence of various parameters of the scheme on the beam characteristics. In selecting the beam recirculation scheme, the fact is determinative that, in the operation of the linear electron accelerator in the standing wave mode, it becomes possible to perform an acceleration of the beam in the opposite direction in the same structure, which does not lead to a significant increase in the size of the entire setup. It is also reasonable to stay with the double passing of the beam along the biperiodic retarding structure, which greatly simplifies the technological implementation of the recirculation process scheme.

Full Text

Title: BLDC torque ripple minimization using modified Staircase PWM

Author (s): M. Senthil Raja and B. Geethalakshmi

Abstract: This paper presents a BLDC motor drive system using modified Staircase PWM (SCPWM). Based on the hall position sensor signal, the controller generates Staircase PWM to drive the BLDC motor. Because it's SCPWM instead of Sine PWM signal, minimize pulsation torque ripple is more efficiently at various speeds. The BLDC motor has the advantage of being a special electrical machine and high power applications a staircase modulation, also known as selective harmonic elimination based method, has been proposed. This method is used to reduce the switching losses to a minimum value and to improve the efficiency of the inverter. Finally, the simulation and experimental results are presented to minimize pulsation

torque ripple of the BLDC drive system.

Full Text

Title: Modelling, simulation and optimization of a reactive distillation process using Minitab and Matrix Laboratory

Author (s): Abdulwahab GIWA and Saidat Olanipekun GIWA

Abstract: Reactive distillation is a novel process that combines both chemical reaction and separation in a single piece of equipment. It is normally accomplished inside a column. Actually, the process has a lot of benefits, especially for those reactions occurring at temperatures and pressures suitable for the distillation of the resulting components. However, the combination of both reaction and separation in a single unit has made the modelling of the process a bit challenging. It has been deemed necessary to employ a mathematical method, with the aid of Minitab, to handle the modelling of this process in an effective manner. Therefore, in this research work, the modelling knowledge of mathematics has been employed to develop equations for the different phenomena occurring at some specific sections of a reactive distillation column. The developed models were simulated and, further, optimized using Matrix Laboratory in order to obtain the values of the model parameters required to give the desired mole fractions of the product components of the process. The results obtained revealed that the developed models were good representatives of the top and the bottom sections of the column used because there were good correlations between the measured and the simulated mole fractions as the R-squared values of the top and the bottom section models were estimated to be 99.32% and 99.03% respectively. Furthermore, the optimization carried out revealed that multi objective problem formulation was the best way of handling this type of a system because that was the one that gave the desired optimum values of the two products from the irrespective sections of the column.

Full Text

Title: Simulation and evaluation of Switched Inductor Boost DC-DC Converter for PV Application

Author (s): Ahmad Saudi Samosir

Abstract: This paper presents the simulation and evaluation of Switched Inductor Boost Converter for PV Application under MATLAB/Simulink software. This paper introduces a boost converter with high dc gain to increase the low output voltage of photovoltaic (PV) module. The inductor of the conventional boost converter is replaced with the switched inductor branch. As a result, the conversion gain ratio of the boost converter can be increased. Simulation results and analyses are provided to evaluate the operation of the converter.

Full Text

Title: Role based authentication to sensitive data using collaborative tagging and scanning with SVM

Author (s): Bhanumathi, Joel and Jude Nithin Joel

Abstract: Tagging system is a standout amongst the most diffused and mainstream administrations accessible on the web. This framework permits clients to include free content names for the most part alluded as labels to the Internet assets for instance websites, pictures, video, audio and even online journals. Web metadata can possibly enhance inquiry, recovery and to shield the end client from a conceivable destructive substance. The organization redesigns their company entrance with open imparting information along with Sensitive information. The question is handled in light of the user profile analysis. In the real framework give the scientific classification of labeling framework and system web technologies determine the names and root for that name which surveys the reliability of assets to authorize web access personalization. To upgrade the productivity of label concealment the protection guaranteed skim with SVM alongside Privacy Enhancing Technology is actualized. SVM is utilized for extraction of information and dark sensitive information. It is accomplished by utilizing the system tag suppression which has the part of giving the security to data. Web client will seek utilizing a catch phrase. The catchphrase might be the area, input or cost to examine the information. The confirmation of the entrance is finished by the administration. The Administration named two parts they are Head Role and Admin. The office head role is to redesign their piece of entry and recover just the relating information. Last verification and endorsement is finished by the administrator. Through the examination proficiency insurances of the proposed plan is accomplished.

Full Text

Title: Implementation of bus tracking, server reporting with bus querying system to minimize waiting time

Author (s): T. Venkata jyothi swaroop, B. Vijitendrasai goud and Pravin

Abstract: Now a days the advancement of the urban area is quickly expanding. This outcomes major transport issue school, work places, office etc. Public transport is major issue in cites to reach their workplaces/destinations. People experiencing few issues in their daily life like heavy traffic, bus arrival delay, and timing. The surrounding information of the bus travelers are collected and used to calculate the bus traveling routes at arrival time at various bus stops. In this GPS is the main framework fixed in the buses which coordinates bus location and client location via latitude and longitude values. The evaluation suggested that android application is created to the user's querying system for tracking the corresponding buses. User will be giving starting and destination place via android mobile to the server, where it transmit its longitude and latitude location values to the centralized server via GPRS.

Full Text

Title: Comparison characteristics of DSR and AODV pathing instructions

Author (s): K. R. R. Mohan Rao, G. Naga Kiranmai, N. Vikas and A. S. Murari

Abstract: Best efficient network system has the selection of proper routing of the path and its protocol. At movable Adhoc System the chosen Instructions taught to better as far as information conveyance and information respectability. Thus the execution investigation of the protocol s is the significant stride before selecting specific protocol. Route development ought to be finished with at least overhead and transmission capacity consumption .In this paper, the execution investigation is done on an Adhoc On-demand Routing Vector and Dynamic Source Routing taking into account an sequence of parameters.

Full Text

Title: The variability of fuzzy aggregation methods for partial indicators of quality and the optimal method choice

Author (s): Mikhail V. Koroteev, Pavel V. Tereliansky, Oleg I. Vasilyev, Abduvap M. Zulpuyev, Kadanbay Baktygulov and Beishenbek S. Ordobaev

Abstract: This article examines the process of evaluating the integral index of the software quality using the method of fuzzy aggregation of multiple private indicators. The aim of the study is to determine the applicability of this approach in practice and research of its formalization and algorithmization approaches. A set of aggregation algorithms in the fuzzy inference model was used and their comparison in the application to the given problem is provided. Various modifications of the standard algorithm of fuzzy inference using fuzzy set operators, as well as different kinds of norms and conforms are considered. The study has revealed a wide variation of aggregation methods and provided the method of selecting the optimal one based on the comparison with standard numerical grades. The applicability of the methods of fuzzy logic was shown in the mathematical explanation of the decision making process, opening up the possibility of fuzzy-linguistic description of the subject area, private alternatives indicators and target vector formalizing.

Full Text

Title: Morphology, chemical composition and magnetization of arc discharge Fe-C soot

Author (s): S. A. Novopashin, M. A. Serebrjakova and A. V. Zaikovskii

Abstract: Composite Fe-C anode sputtering in a low pressure arc discharge has been used to produce Fe-C soot. The chemical composition and size distribution function of iron containing nanoparticles have been measured. The dependency of magnetic susceptibility at different frequencies and magnetization up to saturation were obtained. It was shown synthesized material is super paramagnetic.

Full Text

Title: Reducing the negative impact on the environment through organization of traffic flows considering the emissions of industrial enterprises

Author (s): Ilnar Fargatovich Suleimanov, Gennady Vitalievich Mavrin, Mikhail Pavlovich Sokolov, Yuliya Evgenevna Suleimanova and Liliya Ramilevna Ardashirova

Abstract: Within the research work the authors carried out analysis of the air pollution sources in the city of Naberezhnye Chelny and conducted field examinations of the traffic flow structure and density on the city highways. The highway segments with polluting agent concentrations exceeding the sanitary and hygienic standards were identified, as well as emission allowances on the polluting agents from motor vehicles were determined, considering also the emissions of industrial enterprises. To solve the problem on reducing the emissions of polluting agents to the specified level, the authors developed a simulation model that is able to consider a large number of the road network parameters. An optimization experiment was conducted that enabled to determine emission allowances through the optimization of the traffic flow speed, density and intensity.

Full Text

Title: Calorimeter for measurement internal heat release in foodstuff

Author (s): Stanislav Proshkin

Abstract: The article deals with aspects of development features of manifestation and the cause of the emergence of the sources of an internal heat release in foodstuff. The article considers the theory of the method, which allows measuring the sources of internal heat release of various types of objects and also a design of the heat measuring cell created on its basis. Experimental results of measurement of a heat release are given in the sprouting wheat seeds.

Full Text

Title: Fractal color image encoding scheme based on nearest neighborhood interpolation using isosceles triangle segmentation

Author (s): Shimal Das and Dibyendu Ghoshal

Abstract: Image compression based on fractal coding is a lossy compression technique and normally utilize for gray level images in range and domain blocks of rectangular shape. Fractal based digital image compression techniques' provides a large compression ratio and it is proposed using nearest neighborhood interpolation using isosceles triangle segmentation. In the present study a partitioned iterative function searching based on isosceles triangle shape dimension of image plane has been considered. During the searching the intensity of each pixel needs be transformed and this is done with intensity interpolation based on nearest neighborhood intensity interpolation. The proposed method has yielded higher PNSR with marginally lesser processing time but with very high compression ratio. It is established that the proposed method is suitable for face image as well as natural object images.

Full Text

Title: Design and implementation of a vacuum plant for the simulation of the system pick and place for laboratory control of Surcolombiana University

Author (s): Agustin Soto Otalora, Cindy Liliana Vargas Duque and Nicolas Castelblanco

Abstract: This work provides a tool to enhance the practical and theoretical knowledge of the students in the program of electronic engineering in the Surcolombiana university, specifically for the areas of control, automation and industrial instrumentation, proposing the development of a vacuum plant for the simulation of a pick and place system. It is also implemented an ON/OFF control for the plant, and a friendly graphic interface for the user. Finally, it is delivered a laboratory guide, as well as the recommendations and conclusions from the process of design and development of the project.

Full Text

Title: Home security alert system using moving object detection in Video Surveillance system

Author (s): Godlin Jasil S. P., Shaik Asif Moinuddin, Shaik Baba Ibrahim, M. Sakthivel and B. Sakthi Arjun

Abstract: Video Surveillance systems have long been being used to watch security touchy territories. The making of video Observation frameworks "keen" needs speedy, solid and solid calculations for moving article recognition, classification, pursue and action examination. Moving article discovery is that the essential stride for any examination of video. It handles division of moving articles from video and arrange those things through stationary foundation objects. Object classification step arranges distinguished items into dressed classifications such as human, vehicle, creature, mess, and so on it's crucial to differentiate one from the other articles starting with one sub outline then onto the next sub outline in order to follow and examine their activities loyally. In past framework they have performed foundation subtraction by exploitation vigilant Edge Identification. In vigilant Edge Identification technique we tend to square measure taking two pictures for correlation those square measure foundation picture and forefront picture. This paper propose a secure alert to the users while unknown object detected in the surveillance area. Saliency map is the concept which handles this algorithm efficiently. Rest of the paper discussed about the alert system handling by a GSM.

Full Text

Title: Estimation of Doppler spread fading using modified jake's model

Author (s): N. V. K. Ramesh, D. Venkat Ratnam Y. Aravind, G. Pallavi, K. Uma Alekhya and M. Tejaswi

Abstract: Vehicular networking is a developing range of networking in the middle of vehicles and including roadside equivalence base. Progress in remote interchanges are making imaginable sharing of data through constant equivalence. Two courses for adjusting the established Jake's blurring test system to create different uncorrelated blurring convolutions are proposed. The order measurements of single yield convolutions of probability density function and autocorrelation are determined and are appeared to concur good with hypothetical desires. The cross relationship among various convolutions is about 0. The aim of this paper is to distribute excellent peer–reviewed papers in the territory of vehicular communication.

Full Text

Title: Click Jacking prevention in websites using iframe detection and IP scan techniques

Author (s): P. Asha, Roshni Sridhar and Rinnu Rose P. Jose

Abstract: Distributed Denial of Service (DDOS) is said to be an attack that is faced by many prominent web sites currently. Tight security policies and active measures like using firewalls, Vendor paths can be used to face the former security threats. Though protections are available, for click jacking attack vulnerability can be used to exploit the browser's weaknesses. In addition, it becomes easier for an attacker to detect and frame a page. In this paper we have proposed a solution for preventing the DDOS attack along with Click Jacking attack method. The impact of this click jacking vulnerability is difficult to access or demonstrate.

Full Text

Title: Design and simulation of energy harvesting system using PMN-PT and PZT-5H integrated with Silica

Author (s): S. Nagakalyan, K. L. Narayana and B. Raghu Kumar

Abstract: In this paper, we made an attempt to maximize the power output in the different piezoelectric materials in a unimorph cantilever beam configuration. In the present study, an attempt has been made to macro -scale uni-morph piezoelectric power generator prototypes consists of an active piezoelectric layer, silver substrate and Silica base was designed for frequencies 60 Hz - 200 Hz. An analytical model of a micro power generator is used to obtain displacement, voltage and generated power which are the figures of merit for energy harvesting. This model is presented for three different piezoelectric materials like, PZT-5H and PMN-PT with and without silica base. The designed unimorph piezo energy harvesting system was modeled using COMSOL multi physics and the observed parameters are compared with analytical results.

Full Text

Title: A novel template matching implementation on object based image classification based on Multikernel Fusion Sparse Representation

Author (s): Shivakumar G. S., S. Natarajan and K. Srikanta Murthy

Abstract: This paper introduces and implements a novel object based image classification method on remote sensing images. The novelty introduced in this implementation is the application of a Multikernel Sparse Representation method on the Object based image classification implementation. The template-matching algorithm inspired from the object tracking implementation replaces the process of segmentation usually applied in object based image classification. The Multikernel fusion sparse representation based learning and prediction method is developed for remote sensing image classification. A particle filter framework for the sample template selection with the Multikernel Fusion Sparse Representation optimization technique is used to develop the image classification algorithm. The particle filter will act as the template-matching framework for our classification algorithm and the optimization of the observation model of this framework is carried out using the Multikernel Fusion Sparse Representation. Multikernel implementation has been proved to be more accurate than the feature extraction techniques since it extracts the internal intricacies of the image vector. The Kernels consume lesser memory space and the lesser computational complexity compared to the traditional feature extracting methods. Multikernel Sparse representation was also had proved to be more accurate and less computationally complex while implemented in other applications like the video object tracking. Affine transform based templates are extracted from the image which has to be trained and the kernel matrix is generated which is used for comparison with the templates extracted from the test images. Kernel Coordinate Descent (KCD) algorithm is used to find the similarity measure between the database kernel and the testing kernel. The weight values updated using the observation likelihood method that would indicate whether the test template matches with the database templates. The comparison is carried out with the Multikernel method using the SVM classifier. The results that are observed are kappa coefficient and overall accuracy, which measures the classification accuracy, for images with higher and lower illumination and the images are given as input to analyze the robustness to direction change, performance with different number of classification classes, performance by changing the number of training and testing templates.

Full Text

Title: Discovery of right binary pattern in key management using security matrix and magic cards

Author (s): K. R. Sekar, P. Saravanan and J. Sethuraman

Abstract: In the era of networking, authentication is a critical issue. In any intra or inter subnet communication key management and authentication play a vital role. In the past two decades different methodologies were employed in the key management and its authentication. In this research work, a new ideological factor with collaborative techniques has been proposed. A series of procedures like substitution, transpose and compression have been used to encrypt the plain text and the selected key text. At sender side a critical region has been generated using traditional encryption. The work also studies varying issues with the traditional encryption mechanism and proposes the solution for the problem. At the receiver end the critical region has been verified through the proposed magic square.

Full Text

Title: A novel VAL: Quadrotor control technique for trajectory tracking based on varying the Arm's Length

Author (s): Yasameen kamil N., D. Hazry, Khairunizam Wan and Zuradzman M. Razlan

Abstract: This paper presents the design and analysis of quadrotor with a novel mathematical model based on varying the arm's length instead of varying the motors' speed. This model is named Variable Arms Lengths quadrotor (VAL-quadrotor). The objective of this design is to tackle the problem of nonlinear system model in attitude movement. This accomplished by exploiting the moments of arms to create variable torque around the center of gravity, through increasing or decreasing the length of VAL-quadrotor arms while fixing the motors speed. Thus, the model is converted to a linear controlling system. Since the controlling input to the attitude system is the arms length which is a function of a first order system. The effect of changing the design configuration on the moments of inertia is derived. The stability of the altitude, attitude, and position are achieved by adding a PID controller. The performance of VAL-quadrotor is evaluated by simulation which based on MATLAB code to perform the trajectory tracking.

Full Text

Title: Comprehensive comparison study for routing protocols in Mobile Ad-Hoc Network using NS2

Author (s): Yasir I. Mohammed and Raed A. Alsaqour

Abstract: Mobile Ad Hoc Network (MANET) is a collection of wireless mobile nodes dynamically forming a tentative network without the use of any existing network infrastructure or centralized administration. Nodes of these networks function as routers which discovers and maintains the routes to other nodes in the network. In such networks, nodes are able to move and synchronize with their neighbors. Due to mobility, connections in the network can change dynamically and nodes can be added and removed at any time. In this paper, we compared and evaluated the performance of four routing protocols in MANET: Ad hoc On-demand Distance Vector (AODV), Ad-hoc on-demand multipath distance vector (AOMDV), Destination-Sequenced Distance-Vector routing (DSDV) and Dynamic Source Routing (DSR). Network Simulator version 2.35 (NS2) was used to perform the performance study. The performance of the routing protocols was evaluated based on the routing overhead, average end-to-end delay, packets delivery ratio and packet loss ratio. The simulation results shown that AODV and DSR have better performance than AOMDV and DSDV on varying the network size, whilst DSR, AOMDV and AODV are better than DSDV on varying node velocity.

Full Text

Title: Modified Grouping Efficacy and New Average Measure of Flexibility: Performance measuring parameters for cell formation applications

Author (s): K. V. Durga Rajesh, A. B. K. Chaitanya, V. Sairam and N. Anildeep

Abstract: In cellular manufacturing, formation of cell is a complex and crucial step to increase the machine utilization and productivity of an organization. Binary format or ordinal data are given as input for the part-machine incidence matrix of the cell formation problem. The cell formation problem may contain two or more solutions due to its ill structure. These solutions may be compared using performance measures and the optimal solution can be identified. A standard measure known as Grouping Efficacy produce some conflicting results in some ill structure data. In this paper a new performance measure in binary data known as Modified Grouping Efficacy (MGE) is introduced to nullify the conflicting results obtained by standard Grouping Efficacy. Similarly there are only very few performance measures used as standard measures for ordinal data like GT Efficacy and Global Efficiency. However, these performance measures can lead to subjective decisions which reduce productivity of the organization. So, in order to improve productivity we have taken a new objective measure known as New Average Measure of Flexibility (NAMF). The advantages of both proposed performance measures are demonstrated by comparing with existing performance measures.

Full Text

Title: Performance estimation of microstrip antenna with Sierpinski gasket inverted fractals

Author (s): G. Asa Jyothi, B. Hema Pushpika, P. Siva Sankar, G. Sai Ramya and G. Priyanka

Abstract: In many commercial and defense communication systems, there is a need of compact antennas with high performance, considerable gain and compactness in size. The modern communication systems need such antennas which operates at multiband with wide bandwidth. One of the technique to satisfy that needs is the implementation of fractal geometry on the microstrip antenna radiator. It has been proved that fractal antennas have their own unique characteristics without changing the antenna properties. In the current paper, the performance of the microstrip patch antenna with Sierpinski gasket fractals as inverted triangles has been presented. The base antenna without fractals has been designed at 8.45GHZ operating frequency. As the base antenna offers narrow band width with single resonant frequency, triangular fractal geometry was implemented on the patch up to the second iteration to improve the gain and wide band width at multi bands. The fractal antenna characteristics are analyzed at each iteration by using electromagnetic simulator HFSS 13.

Full Text

Title: Dynamic key gen: Dynamic and flexible group key generation based on user behavior monitoring

Author (s): A. Yovan Felix, Sneha and Malavika Sahithi Y.

Abstract: Data storage and resource sharing in rental mode are the key features in cloud technology where clients will just change and share information as a cluster. To affirm shared information uprightness might be checked out in the open, clients inside of the group must be constrained to figure marks on every one of the pieces in shared information. Entirely unexpected squares in shared information are ordinarily marked by various clients in light of information adjustments performed by various clients. For security reasons, once some user is denied from the gathering, the check that were predecessor marked by this repudiated client ought to be re-marked by an associate in the current client. The simple

technique, that allows associate in Nursing existing client to exchange the comparing a piece of shared information and re-sign it all through client denial, is wasteful on account of the gigantic size of the mutual information in the cloud. In this paper, we propose an interesting open inspecting system for the honesty of imparted information to efficient client repudiation. By using the considered intermediary re-marks, we have a tendency to empower the cloud to leave obstructs for the benefit of existing clients all through client disavowal, all together that current clients don't need to be constrained to exchange and again marking hinders without anyone else. Moreover, an open supporter is frequently prepared to review the honesty of shared information while not recovering the entire information from the cloud, despite the fact that nearly a piece of shared information has been again leaving by the cloud. In addition, our instrument is in a position to bolster clump validating so as to review numerous inspecting errands in the meantime. Our study demonstrates that our component will extensively enhance the power of client repudiation.

Full Text

Title: Efficient team development for IT companies using genetic algorithm and evolutionary strategies

Author (s): Lakshmanan K., Joseph Christ Nithin I. and N. Srinivasan

Abstract: Selecting a team for project management is a challenging task. Validating one's skill is a tough task to estimate. The traditional methods lag in time and skill strategy. We in this project proposed a novel method of finding one's skill set and selecting employees for project development using genetic algorithm. The team selection by using genetic algorithm can be used in various field and organizations such as sports, companies, industries, etc. It is to assign efficient staffs for a project in IT-companies according to their skill, performance and other activities.

Full Text

Title: Focused crawling of online business Web pages using latent semantic indexing approach

Author (s): Thamer Salah and Sabrina Tiun

Abstract: With the exponential growth of textual information available from the Internet, there has been an emergent need to find relevant, in-time and in-depth knowledge about business topic. The huge size of such data makes the process of retrieving and analyzing and use of the valuable information in such texts manually a very difficult task. In this paper, we attempt to address a challenging task i.e. a crawling business-specific knowledge on the Web. To do that, the main goal of this paper is to describe a new method of focused crawling with latent semantic indexing for online business web pages. We describe a new model for online business text crawling which seeks, acquires, maintains and filter business pages. This model consists mainly from two main modules: a crawling system and a text filtering system. The crawler is used to collect as many web pages as possible from the news websites. This focused crawler is guided by a latent semantic index and information from Word Net (business filter) which learns to recognize the relevance of a web page with respect to the business topic and it is also utilized a set of domain specific keywords. The obtained results also on online real word data show that the focused crawler is very effective for building high-quality collections of business Web documents.

Full Text

Title: Prevention of surreptitious denial of service in cloud computing

Author (s): K. Sathiyapriya and Uday Bhaskar Reddy

Abstract: An approach to orchestrate stealthy assault patterns, which exhibit a slowly-increasing-depth pattern, designed to inflict the maximum financial rate to the cloud consumer, while respecting the job measurement and the carrier arrival cost imposed by way of the detection mechanisms. We describe both find out how to apply the proposed technique, and its results on the target process deployed within the cloud. In precise, we suggest an object-centered approach that enables enclosing our logging mechanism at the side of users' information and policies. We leverage the JAR programmable capabilities to both create a dynamic and touring object, and to make certain that any entry to users' knowledge will set off the authentication and the automated logging to the JARs. To give a boost to consumer's manage, we also furnish allotted auditing mechanisms. We furnish broad experimental studies that show the efficiency and effectiveness of the proposed systems.

Full Text

Title: A novel approach to build a low cost architecture for off the shelf target tracking using wireless communication

Author (s): W. Sai Raghavendran, Sure Venkatapathi Raju and K. Srilatha

Abstract: Now a day's border security that incorporate social, cultural, behavioral and organizational aspects of interactions among border security forces and smugglers. The integrated technology architectures made up of fixed mobile sensor and surveillance networks. These tools plays important role in border security operations, planning, analysis and training. Sensors are being used to improve border security and also collecting the large number of data and databases. These sensors can improve variety of problems, sometimes reacting to events and sometimes triggered by random events which are called false alarms. The aim of this project is to enhance the ideas in a sensor network framework that can help to increase the security for the border crossing. In our project proposed system provides security to the boat using GPS tracking and objects. Indian government is planning to introduce the new technology for tracking with in the border which carry illegal things (like government issued sugar, rice distribution without legal permission). The explosive materials for industrial purposes can be tracked by various wireless sensor networks.

Full Text

Title: Implementation of online signature verification using Matlab and GSM

Author (s): C. Prem Reddy, D. Santhosh Kumar and K. Srilatha

Abstract: Online signature verification using MATLAB and GSM is based on the simulations in MATLAB and mobile devices. We introduce a effective method for online signature verification. An online signature is computed in linear time. The resulting signature template is compact and requires same space. This has been verified over a set of images. The results show that the performance of the proposed technique is similar and often higher level to state-of-the-art algorithms despite its simplicity and efficiency. In order to verify the proposed method on signatures on camera devices, a data set was collected from an uncontrolled environment and over multiple periods. Experimental results on this data set confirm the effectiveness of the proposed algorithm. The results demonstrate the problem of within user variation of signatures over multiple sessions.

Full Text

Title: Channel Allocation and Braided Disjoint Multipath Routing in wireless sensor network

Author (s): S. Elamathy and S. Ravi

Abstract: In wireless sensor networks, concurrent transmission causes performance degradation. In this paper, channel allocation based on a new combinatorial technique of Latin square generation and Braided Disjoint Multipath Routing Algorithm (BDMRA) is proposed. The number of nodes in the network is set as the order of the Latin square. The row and column of Latin square is indexed with numbers are used for Channel Allocation. BDMRA algorithm reduces the network redundancy. The established braided paths are disjoint and maintained between the source and destination as an end-to-end transmission path. Path establishment time is reduced since the path connecting the source and destination node requires only the connectivity between the source and destination clusters.

Full Text

Title: Incident mapping and EAS using decision support system

Author (s): A. Yovan Felix and T. Sasipraba

Abstract: In traditional emergency alerting system, we have to inform the emergency team manually by calling them. Even though there are some applications for emergency alert which is time consuming to recover the accident. To overcome these difficulties in our system we are developing a mobile application which will send an alert to emergency team directly by uploading the photos taken at the accident scene. Use of Online source, our application will automatically identify the incident location using GPS from the user mobile. Then the emergency team will take decision to rescue the accident place by analyzing the data which will be stored in database. To extract the relevant data using the concept called data mining. After making decision by the emergency team, they will pass the information to the nearby emergency service like Ambulance, Fire service, Police service, etc. Because of this system, time consuming is less than the other systems, User friendly, motivate the public to help society. The system views in both table form as well as the map form of the process. This system takes the advantage of the Social media to help the public by passing the information among society.

Full Text

Title: RTL level power optimization of Ethernet media access controller

Author (s): V. Baskar and K. V. Karthikeyan

Abstract: Ethernet is the most popular layer-2 protocol and widely used in Local Area Networks (LAN's) and Metropolitan Area Networks (MAN's). Ethernet connectivity due to its broad existence had become a part of Internet-of-Things (IoT) for gateway solutions. With broader market opportunity there is a need for Ethernet connectivity devices with low power consumption. In this paper, the experimental analysis and results of power consumed by Ethernet MAC design, with and without low power techniques, at Register Transfer Logic (RTL) level are presented.

Full Text

Title: Mitigation of GPS multipath effects using adaptive normalized LMS algorithm

Author (s): M. Sridhar, Ch. Sai Krishna, K. Jaya Sai Reddy, M. Manikranth Kumar, N. Sri Lakshmi and D. Venkata Ratnam

Abstract: The objects surrounding the GPS receiver easily distorts the satellite signal. With the increasing Global Navigation Satellite System (GNSS) based applications, they require reliable and accurate navigation solutions in challenging environments such as urban communities. In such situations, receiver accuracy and reliability are restricted due to multipath signals. Multipath is the phenomenon of propagation in which the signals traveling through two or more paths are received by the receiver. Multipath signals are those received signals other than LOS signal by antenna. Multipath signal is the combination of the direct as well as indirect signal. Finally, multipath leads to poor measurement accuracy and fading. In this paper Normalized LMS adaptive filter algorithm is mainly used to mitigate multipath signals. Other adaptive filters are also have been implemented to compare the results.

Full Text

Title: Creation of a mapping system to generate objects similar to bit-coins

Author (s): Arun Karthik, Ashwin Joseph and R. Sethuraman

Abstract: The Usage and Conversion of Images into numerical values - similar to QR Bar Codes with the intention of creating a substantially complex character value that would initially percolate, depending on, predominantly heavy processing, in order to generate characters with the end results matching a particular user to user feed. The ability to, for example, in the typical social media spectrum, that is, currently present in our eco-system, would be an ideal way to illustrate how this might, make better sense. Suppose the image, or images, such as your profile picture, would be used for the metamorphosis of that particular image to correspond to your phone number, this in turn would create a secure and stable way to re-define one's vulnerability assets on said mobile device - every time there's a change, in a particular image. What would be true - is the notion that, other people, in general, have access or possess with reasonable certainty - the ability to see and view - both your picture and phone number, as it would generally be in the public domain when you call, or inside an application. Though, this drawback could be easily overcome, with the help of Service Providers who, would be the only ones that would with reasonable flexibility be able to utilize someone's network - whether GSM, CDMA, etc. to provide access to confidentially secured and locked networks along with the image at hand.

Full Text

Title: Numerical analysis of reinforced concrete hollow-core slabs

Author (s): Adel A. Al-Azzawi and Sadeq Aziz Abed

Abstract: A longitudinal voids through the one way reinforced concrete slabs are very important for utility services and for structural purposes by reducing the own weight of the structure. These types of slabs were analyze numerically by using nonlinear solution of a finite element program ANSYS with dimensions (2.05m) length, (0.6m) width and (250mm) thickness. Three sizes of circulars cores are used with core diameter (150, 100 and 75mm) by reducing in self-weight of slab (23.5%,

15.7% and 8.8%) respectively. The modeling of the materials, the concrete slabs, steel reinforcement bars and steel plates for loading and supports were done then meshing it before solution. The analysis results are compared with the solid slabs types under the same conditions. Some of parameters are studied such as the ratio of shear span (a) to effective depth (d) (a/d), size of cores, shape of core, type of loading and effective of top steel reinforcement. It was founded that reducing the self-weight of concrete caused reducing in ultimate capacity of slabs by (20.6%, 13% and 3.8%) compared with solid slab with core diameter (150, 100 and 75mm) respectively. The ultimate capacity of the slab reduces with increasing the ratio (a/d). Using the square shape of the holes reduces the cracking load and ultimate capacity by about (13.5%) with increasing the deflection by (39.5%).

Full Text

Title: Engineering geological study of Malino-Manipi landslide susceptibility South Sulawesi Indonesia

Author (s): Busthan, A. M. Imran, L. Samang and M. Ramli

Abstract: Mountainous area of southern South Sulawesi Province, Indonesia is prone to landslides. During 2009 to 2013 more than 50 landslides have occurred causing road connecting MalinoGowa Regency to ManipiSinjai Regency heavily damaged. The aim of this research is to find out the influence of engineering geological aspect against landslide susceptibility in the study area. The research uses field survey method consisting of: characteristic study of tuff weathering profile: determining water content, infiltration rate and shear strength of weathered rock and residual soil, as well as laboratory analysis covering petrographic analysis of fresh rock composition. Field survey result indicates that tuff profile consists of six stages including unweathered tuff (fresh), slightly weathered tuff, moderately weathered tuff, , highly weathered tuff, completely weathered tuff, and residual soil. Most tuff mineral compositions are volcanic glass. The more the weathering stage increases, the higher the water content and infiltration rate. Conversely, the shear strength becomes low. Under this condition, landslide becomes susceptible.

Full Text

Title: Scaling process of continual k-nearest neighbour queries to locate from databases

Author (s): P. V. Vijaya Krishna, L. Lakshmanan and K. V. Rajesh Kumar

Abstract: Location Based Services and Geographical Information System together have enabled a new era in the development of mobile based applications in all the industrial and commercial applications. Recently these services are widely used in military, naval and air force defense services to find the enemy location. Unlike the current information services such as those on the web and as mobile apps, the GIS has benefited greatly from developments in various fields of computing. Better database software allows the management of vast amounts of information that is referenced to digital maps. Computer graphics techniques provide the data models for storage, retrieval and display of geographic objects. Geographic Information Science, the field of science behind GIS, offers specialized knowledge about spatial data collection and processing, data modeling as well as modeling of spatial processes for analysis purposes. We propose a method for finding the locations of various places. According to user location using GPS, the user can access the important unique data without unwanted data Information related to the searched location.

Full Text

Title: Smart roadways lighting prototype system for public awareness

Author (s): Virendra R., Y. V. R. Sathyadeep, T. Ravi and N. Mathan

Abstract: Saving and efficient utilization of electricity is utmost importance in the present world. Power saving concept is introduced to street lighting system with automatic detection of vehicles and rainfall. The proposed street lighting automation system is designed using Light dependent resistor (LDR), IR sensor and Raindrop sensor for day or night detection, vehicle detection and rainfall detection. The system is developed using ARM7 microcontroller. In the proposed system the sodium or halogen bulb are replaced with LED's. During night LDR allows all lights to glow at less intensity, IR sensor detecting vehicles allow LED's ahead of vehicle to glow at high intensity and dim the trailing lights, and intensity varied using PWM. Raindrop sensor detecting rainfall allows all lights to glow irrespective of vehicle movements. Implementation of this system saved energy to great extent.

Full Text

Title: Algorithm of autonomous vehicle steering system control law estimation while the desired trajectory driving

Author (s): Sergey Sergeevich Shadrin and Andrey Mikhailovich Ivanov

Abstract: The article discusses an estimation algorithm of control actions on steering system in order to provide vehicle driving along desired trajectory with accounting of non-steady (transient) driving modes. Minivan tests on MADI proving ground are described, the developed theory is verified.

Full Text

Title: Improved performance of evolutionary game theory based on cooperation in VANET

Author (s): Merlin Mathew, V. Mouna Priyanka and K. V. Karthikeyan

Abstract: By applying the principles of MANET (mobile ad-hoc network) the spontaneous creation of VANET (vehicle ad-hoc network) which are the key components of the intelligent transportation system belong to addition and deletion of nodes. In vehicular interaction networking properties plays an important role. This paper deals with handover scheme to investigate the effects of co-operation in vehicular networks. In different networking conditions like clustering of nodes which increases connectivity and lead to more number of hubs which indeed reduces probability for nodes to change their strategies so easily. In this way relatively more number of packets can be routed through the network cluster with relatively higher rate using efficient routing algorithm which also avoids the receiving of common packets at different nodes due to high cluster in the network. Simulation of this game theory is processed by using NS 2.34 to show the effectiveness of high cluster nodes with minimum payoff and higher efficiency.

Full Text

Title: Management of hospital supply chain: new methodology for improving the performance of the maintenance of medical

devices

Author (s): Driss Serrou and Abdellah Abouabdellah

Abstract: This paper is directed towards a study of the impact of grouping of pharmacies in the hospital supply chain performance for the maintenance of medical devices. The first part of the article shows the interest of the hospital logistics and the literature on the evaluation of performance. The second part describes the steps of our methodology. We finish our work by applying our approach to a hospital in Morocco.

Full Text

Title: Analysis of fading effects due to ionospheric scintillations using modern GNSS signals observed at northern low latitude station

Author (s): Miriyala Sridhar, Tirumalasetti Uday Bhaskar, Akkala Leela Prasanna, B. Rohit

Abstract: The major threat to Global navigational system's signal availability, accuracy, and processing is the signal fading caused due to ionospheric scintillations. In this paper the triple –frequency data of GPS signal collected at Koneru Lakshmaiah University, Guntur, India is processed to analyze the signal fading characteristics of GPS signal bands. Ionospheric scintillation parameter known as fade duration is calculated using GPS C/N0 measurements. It is observed that maximum fade duration is about 90 sec. It is evident that the L5 signal fading intensity is low as compared to L1 and L2 signals. The outcome of this work would be useful for developing inter-frequency aiding algorithms used in signal tracking and reacquisition in future GNSS receivers.

Full Text

Title: Synthesis of titanium oxide nanoparticle complemented with optical properties

Author (s): Ali H. AL-Hamdani, Alaa N. Abdalgaffar and Suma H. AL-Shaikh Hussin and Ahmed A. Al-Amiery

Abstract: Titanium oxide nanoparticles were prepared via Sol-gel method by mixed of titanium tetra-iso-propoxide (TTIP) and nitric acid at (pH=1.85).The optical properties were studied. The wavelength and transmittance at ?=260 nm were 84.17 nm and 1.6% respectively. Maximum reflective (R) at ?=410 nm was 20% and decrease with wavelength increase; moreover the indirect allowed energy gap (Eg) was 3.2 eV. Optical constant such as absorption coefficient (?), extinction coefficient (k) are calculate and the reflective index (n) was 1.3438.

Full Text

Title: Effects of assembly errors on tooth contact ellipses and transmission errors of a double-crowned meshing gear pair

Author (s): Van-The Tran

Abstract: A helical gear is crowned in both the cross-profile and longitudinal directions called a double-crowned gear. The tooth surface of the gear can be generated by hobbing, shaving, honing processes. In this paper, the hobbing process is used for double-crowning the tooth surface of work gear with three different hobbing methods included conventional method, variable tooth thickness (VTT) method and modifying the work gear rotation angle method. A computer simulation example is implemented to compare the meshing-conditions, contact ellipses, and transmission errors under various assembly errors of the double-crowned gear pairs that are generated by the three hobbing methods.

Full Text

Title: A rough set based data model for heart disease diagnostics

Author (s): Aaron Don M. Africa

Abstract: Heart disease is one of the leading causes of death to human beings. This disease has taken numerous lives throughout human history. Heart disease describes a range of conditions that affects the heart. This disease refers to conditions that involve blocked blood vessels that can lead to a heart attack or stroke. Heart failure caused by damage to the heart that has developed over time cannot be cured. But it can be treated to improve its symptoms. In general, the earlier that a heart disease is detected the better options are available to diagnose it. This pape r presented how Rough Set theory is applied to develop a data model to aid a physician to diagnose heart disease. In particular this research will utilize the data obtained from the Hungarian database UCI Machine Learning Repository. The results of the research showed that the rough set theory successfully reduced the dimensionality of the heart disease data set by approximately 49%. Empirical testing was used to validate the rules and gave a 100% result.

Full Text

Title: A low power Multi Bit Flipflop Merging technique using WSN nodes

Author (s): S. Vimalsree and S. Karthikeyan

Abstract: In a wireless sensor network nodes, the highest energy consumption exhibits by wireless communication. The low power VLSI designs plays a vital role in today's wireless devices because of limited energy supply from the batteries. The consumption of power reduction not only enhancing the battery life but also reduce the overheat problem. In a modern IC, the power consumption done by the clock which plays the major part in the VLSI designs. Here, the low power is attained by Multi Bit Flipflop Merging technique in WSN using Parallel Prefix Operations (PPO). Along with the power, the minimization of area and Delay is also considered.

Full Text

Title: Design of Low Power Low voltage CMOS Amplifiers in Subthreshold region

Author (s): L. Premalatha and P. Kavi Priya M. E.

Abstract: The growing demand of portable electronics equipment makes the circuit designer think about low power low voltage integrated circuit design. The major drawback on implementing strong inversion low-voltage CMOS circuits is the threshold voltage which does not scale down as the same rate as compared to the power supply. Hence the design of electronic circuits operated in subthreshold region has become an absolutely necessary feature in order to provide efficient benefits

by technology scaling. This Project focuses on the weak inversion design of low power low voltage Inverter, Nand gate, common source amplifier, Differential amplifier and Operational Transconductance Amplifier (OTA). The CMOS OTA is designed in 350 nm CMOS TSMC process technology and BSIM 3v3 SPICE model and obtained 66db gain, 61 degree phase margin with 160nW power consumption by applying 0.9V supply voltage. In design of CMOS OTA TANNER EDA TOOL is used.

Full Text

Title: An overview of character recognition focused on offline handwriting

Author (s): A. Jailin Reshma, J. Jenushma James, M. Kavya and M. Saravanan

Abstract: The programmed acknowledgment of written by hand content -, for example, letters, compositions or whole books - has been a center of serious examination for a very long while. Especially in this field of unconstrained penmanship acknowledgment the written work styles of different journalists were managed, serious challenges are encountered. Engagement is basic to the achievement of learning exercises, for example, composing, and can be advanced with suitable feedback. Here, we portray a learning scientific framework called Tracer, which infers behavioral engagement measures which makes perceptions of behavioral examples of understudies composing on a cloud-based application. Be that as it may, the discoveries from the present study recommend that envisioning power could be helpful to recognize diverse understudy practices when drawing nearer a composition task. It is gotten from a system neural based framework for unconstrained penmanship acknowledgment. As such it performs template-free spotting, i.e. it is a bit much for a catchphrase to show up in the preparation set. The watchword spotting is complete utilizing a change of the binarization calculation in conjunction with an intermittent neural system. This paper exhibit that the proposed frameworks beats not just an established element time contorting based approach moreover a present day watchword spotting framework.

Full Text

Title: Simplified interest classification using social media

Author (s): Vignesh Rajkumar, Siva Vikram and Kamalesh

Abstract: There are many non profit organizations incorporated but only few survive the long run. This is because of the increased financial constraints and lack of volunteers. Considering the fact that the primary source of income for such organizations are donations and the primary source of manpower is by word of mouth and mass communication means, this proposed hypothesis is to connect non profit organizations to potential volunteers and donors who will be interested in the organization's cause and vision, eventually supporting them by donations and manpower during community events hosted by the organization, at an affordable cost.

Full Text

Title: Flower image segmentation: A comparison between watershed, marker controlled watershed, and watershed edge wavelet fusion

Author (s): Syed Inthiyaz, B. T. P Madhav, P. V. V. Kishore Kumar, Vamsi Krishna M., Sri Sai Ram Kumar M., Srikanth K. and Arun Teja B.

Abstract: Watershed Transformation is one of the powerful tools for image segmentation. Watershed transformation based segmentation is generally referred to marker controlled segmentation. This paper proposes a new approach of image segmentation that includes histogram equalization and image smoothening techniques with the Prewitt or sobel edge detection operator. The results when compared with the previous method, shows that this can achieve more accurate segmented results and can reduce the over segmentation effect.

Full Text

Title: An implementation framework for integrated lean construction system for Indian scenario

Author (s): Kasiramkumar T. and Indhu B.

Abstract: Indian Construction projects suffer from cost and time overruns which leads to wastage and productivity problems that directly affect overall industry's profitability and economy. Today's economically developed nations also face these problems. As a result, researches and methodologies have been developed to reduce the risk of overruns and improve project outcomes. A number of these methods are based upon Lean production principles that focus on identifying value, eliminating wastage and creating a smooth flow of materials, information and work. Slow adaptation of these Lean concepts by contractors has also been noticed from the past decade. This principle has been found to improve the reliability of project delivery in complex construction environments. However, implementation of this technique is being a great challenge as it requires technical expertise as well as lots of paper works behind. This paper focus mainly on incorporating traditional management system followed with Lean construction thereby developing a simplified lean implementation framework and recording format to measure daily performance occurred and required in construction projects. By effectively utilizing these data, various analyses generating value adding reports and information for continual improvement of the project shall be achieved. Proper investigation of these reports and finding out the root cause would facilitate construction projects to be free from time and cost overrun.

Full Text

Title: EB monitor - LIFI based integration of user behavior monitoring, privacy preserving

Author (s): A. Yovan Felix, M. Balaji and B. P. Abinesh

Abstract: Light Fidelity technology is a data transmission method which employs illumination for transferring light or data as a communication medium. This paper illustrates development of advanced infrastructure electric metering, user privacy and power management system is maintained. Energy saving plays a more important role in world scenario. The smart meters adoption conveys new privacy anxiety to general public. The individual factories/homes data metering is accumulate each 15 minutes. The probable to infer electricity consumption patterns of entity users. To protect user privacy completely de-centralized scenery. In this paper propose a method to monitor the user behavior and calculate current consumption. This system tracks the user like TV Programmer through monitoring TV Remote as of remote Place. Various control modes and Device control Time are monitored. This information preserves and stored securely. The data transmits using LED variation intensity and it has faster than human eye. This is also known as visible light communication or optical wireless technology. Through LIFI technology EB meter interfaced and the data transmitted to EB server. To confirm switching state device Current Sensor connected to device. Android Application is arranged to consumer to Payment

System. Dual Cost is accused in Permitted maximum Current service. By simulated data, verify proposed method feasibility and reveal performance recompense over existing methods.

Full Text

Title: Development of Geo-spatial maps for maintenance of water supply schemes

Author (s): P. Mariappan, A. Raja Jeyachandra Bose, P. Alex Praveen, S. Sreechanth and T. R. Neelakantan

Abstract: Recently, multi-village water supply schemes are erected for quality affected habitations in India. Operation and maintenance of multi-village water supply schemes require a lot of data viz: source, pumping stations, pipe line alignment, sizes of pipes, pressure, elevation, soil type etc. Various drawings and plans are prepared rarely with geo-reference during project planning and design. For Engineers in charge of maintenance, Geo-spatial maps with the above details will help in effective operation and maintenance of water supply schemes like for planning for augmentation, identifying leakages, pollution control etc. An attempt has been made to prepare different utility maps for a multi-village water supply scheme, named Vellur and 24 habitations in Musiri union, Trichy district, India, using GIS tools. Methods adopted to prepare maps and uses of developed maps are presented.

Full Text

Title: Survey on VANET technologies and simulation models

Author (s): Yusor Rafid Bahar Al-Mayouf, Mahamod Ismail, Nor Fadzilah Abdullah, Salih M. Al-Qaraawi and Omar Adil Mahdi

Abstract: Vehicular ad hoc network (VANET) is a distinctive form of Mobile Ad hoc Network (MANET) that has attracted increasing research attention recently. The purpose of this study is to comprehensively investigate the elements constituting a VANET system and to address several challenges that have to be overcome to enable a reliable wireless communications within a vehicular environment. Furthermore, the study undertakes a survey of the taxonomy of existing VANET routing protocols, with particular emphasis on the strengths and limitations of these protocols in order to help solve VANET routing issues. Moreover, as mobile users demand constant network access regardless of their location, this study seeks to evaluate various mobility models for vehicular networks. A comparison of IEEE 802.11p and Long-Term Evolution (LTE) technologies for several applications in the vehicular networking field is also carried out in the study. One key component in the VANET structure that this study intends to draw special attention is the warning structure consisting of Intelligent Traffic Lights (ITLs), which is designed to inform drivers regarding the existing traffic situation, thus enabling them to make appropriate decisions. Last but not least, the VANET simulation tools for data collection are also evaluated.

Full Text

Title: Production performance of horizontal gas wells associated with non-Darcy flow

Author (s): Jing Lu, Sima Li, Md Motiur Rahma and Freddy H. Escobar

Abstract: In the petroleum literature, non-Darcy flow is assumed to be a near wellbore phenomenon; consequently a gas reservoir could be divided into Darcy's flow domain and non-Darcy's flow domain. Assume only radial flow occurs in the near wellbore non-Darcy's flow domain, and assume the radius of this domain is integer multiple of wellbore radius, Lu et al. (2011) proposed binomial deliverability equations for partially penetrating vertical gas wells and horizontal gas wells. By solving a set of simultaneous equations with respect to non-Darcy's flow domain rn and flow rate at standard conditions Qsc, this paper presents new binomial deliverability equations for horizontal gas wells, which can account for the advantages of horizontal gas wells where non-Darcy effect is less pronounced than that in vertical gas wells. The calculation results show that non-Darcy flow domain radius is smaller than 15 times wellbore radius, which further proves turbulent effect only occurs in the vicinity of wellbore. The calculation results also show that the production rate loss of horizontal wells caused by the turbulent flow is small.

Full Text

Title: Pro-SMS using cloud: A protocol for end-end private messaging

Author (s): N. Mohamed Azharudeen, P. Saravanan M. E. and Melvin Abraham

Abstract: Privacy has been a major concern with respect to messaging now a day. In the traditional SMS system, the messages have the danger of being observed due to the presence of the SMS center in between the users who help to transfer of messages. A concern when confidential data needs to be shared through an SMS. These messages are transmitted as plaintext from the mobile user (MS) to the SMS center (SMSC) across a wireless net. The contents of these messages are stored in the systems of the network operators and can well be read by their personnel during the whole transmission process. And then the traditional SMS service offered by several mobile operators does not assure privacy of messages being transmitted over the net. To overwhelm, a protocol provides end-to-end privacy during the transmission of SMS over the mesh. This is accomplished by integrating Google's GCM service with information hiding techniques incorporated using cryptographic algorithms of AES.

Full Text

Title: Performance evaluation of ACS in Viterbi decoder using parallel prefix adders

Author (s): M. Balaji, P. Arun and V. Balamurugan

Abstract: Modern Digital Communication System usually employ convolutional codes with large constraint length for better decoding action, which leads to large intricacy and power consumption in Viterbi decoders. It is essential to use radix 2 in Viterbi decoder to prune significant portions of trellis state to dramatically power consumption, high rate, and area lessening. In these project, we are using the parallel prefix adder like kogge stone adder in ACS unit for the improvement of Viterbi decoders. To design and increase the performance evaluation of (Add/Compare and select) ACS unit in Viterbi decoder. To analyze the Viterbi Decoder algorithm. Implementation of efficient ACSU with different fast adders. Achieve more efficient power consumption and decreasing computational complexity.

Full Text

Title: Boosting the accuracy of weak learner using semi supervised COGA techniques

Author (s): Kanchana S. and Antony Selvadoss Thanamani

Abstract: This article elucidate and appraise a technique for imputing missing values using right machine learning approach for predictive analytics solutions. Using supervised and unsupervised learning techniques make predictions based on historical dataset. This survey carried out using comprehensive range of databases, for which missing cases are first filled by several sets of reasonable values to create multiple finalized datasets, later standard data procedures are inserted to each destination dataset, parallel multiple sets of output are merge to produce a single inference. In statistics, the Naïve Bayesian approach provide supplemented information in the form of a prior probability distribution, prior information about the function to generate and estimates misplaced parameters. The main goal of this article provides suitable data imputation algorithms and also implementing Bolzano Weierstrass in machine learning techniques to evaluate the performance of every sequence of rational and irrational number has a monotonic subsequence. To reducing bias data, implementing Boosting algorithms to perform the process of turning the noisy classifier into final classifier then to correlate with true classification. This articles represent AdaBoost techniques to improve the performance of the final classifier. Experimental results shows the proposed approach have good accuracy and results of simulation studies are also presented.

Full Text

Title: Probabilistic prediction of time performance in building construction project using Bayesian Belief Networks-Markov Chain

Author (s): Tri Joko Wahyu Adi, Nadjadji Anwar and Fahirah F.

Abstract: Time performance is one of the main success criteria of construction project. There are many uncertainty factors that affecting the time performance of building construction projects. However, time performance measurement on the previous research didn't calculate probability the correlation of uncertainty factors. This study aims to predict the probability of project time performance using Bayesian Belief Networks (BBN)-Markov Chain (MC) hybrid. MC is used to represent the dynamic progress of the project and connected the uncertainty factors by BBN. Data is collected by literature study, location survey, questionnaire and interview with expert. Model validation is investigated by applying in a case study of construction projects, building P, Q and R in the city of Surabaya. The results showed that the time performance prediction of the building construction project using the BBN- Markov Chain hybrid was accurately. It can be used measurement method of time performance and provide early warning of time delay in construction project.

Full Text

Title: Multiband MSP spiral slot antenna with defected ground structure

Author (s): K. Phani Srinivas, Habibulla Khan, B. T. P. Madhav, M. Tejaswi, Sk. Md. Feroz, P. Durga Madhuri and M. V. Mahesh

Abstract: Defected ground structures are one of the key important structures to attain multiband characteristics in the microstrip antennas. In this paper, spiral shaped defected ground structures are proposed to improve the performance of different passive circuits, including dual, triple and multiband characteristics and to suppress harmonics in the patch antennas. The proposed defected ground structure monopole antenna is resonating at multiband with size reduction to perform LC resonant property in the operating band. By incorporating defected ground structure in the antenna model, additional resonant frequencies are attained due to the abrupt change in the current path of the antenna. The proposed antenna is prototyped on FR4 substrate and measured results are obtained from ZNB Vector Network Analyzer. The simulated results are in good agreement with measured results of the fabricated antenna model.

Full Text

Title: An FPGA based adaptive Viterbi Decoder implementing path metric calculation

Author (s): Vijaya Iyyappan A. and Balamurugan V.

Abstract: Wireless networks sometimes use refined Forward Error Correction (FEC) techniques like Viterbi rule to combat with with the channel distortion effects like multipath weakening and inter symbol interference. Viterbi rule is utilized in wireless communication to rewrite the Convolution codes; these square measure the category of FEC codes. Such decoder's square measure complicated and dissipates great deal of power. Therefore this paper presents the planning of associate degree reconciling Viterbi Decoder (AVD) that finds the trail and to cut back the facility and price and at constant time increase in speed. Most of the researches aimed to cut back power consumption or work with high frequency for mistreatment the decoder within the fashionable applications like three GPP, DVB, and wireless technology. Field Programmable Gate Array technology (FPGA) is taken into account as extremely configurable choice for implementing several refined signal process task. The planned Viterbi decoder style is simulated on Modelsim.SE6.3f and enforced mistreatment VHDL code.

Full Text

Title: Clonal algorithm for emission constrained economic dispatch problem in thermal power plants

Author (s): R. Mathi and S. Jayalalitha

Abstract: These days, power system planners are looking for ways to reduce emission from power generating stations especially coal based thermal power plants without compromising the load factor. The economic dispatch problem allocates units for a given load without considering its emission. The present paper proposes a multi-objective optimization method, which uses Artificial Immune System based Clonal Selection Algorithm to solve problems related to emissions and economic dispatch along with unit commitment of generators in a thermal power system. A penalty factor has been imposed for violating the critical emission limits which is subject to the impact it causes on the environment. An 'Artificial Immune System' based Clonal Selection principle is used to select a suitable generator from a pool of generator units. Fitness has been evaluated for the proliferated units. EED problem involves power demand equality and inequality constraints under various operating conditions. Finally, the best units were selected and committed for a given load. The 'Clonal Selection' method has been compared with Non-Dominated Ranked Genetic Algorithm (NGDA) and Clonal Algorithms to prove its robustness and superior optimal selection. To understand the proposed method, a 'IEEE -30 bus 6 unit test system' (with and without load uncertainty) is considered for solving the EED problem using MATLAB simulation and results are compared.

Full Text

Title: Estimating above ground biomass in hill dipterocarp forest, Kelantan, Malaysia using Landsat 8 OLI

Author (s): N. S. Aisyah, M. F. Norashikin, B. Ibrahim and R. Rhushalshafira

Abstract: Above ground biomass estimation for hill dipterocarp forest has received much attention in recent years because the change of biomass regionally is associated with important components of climate change. Accurate biomass estimation is necessary for better understanding of deforestation impacts on global warming and environmental degradation. This paper aims to develop allometric equations to estimate biomass in hill dipterocarp forest using satellite image Landsat 8 OLI. This study was executed in three different Permanent Reserved Forests (PRF) in Kelantan namely Bukit Bakar Recreational Forest (BB), Gunung Basor Forest Reserve (GB) and Gunung Stong Forest Reserve (GS). A total of 39 sampling plot were established. Regression analysis were used to developed several models. Model with NIR band is known to be the best model to estimate above ground biomass.

Full Text

Title: Tensile strength of abaca strands from Sangihe Talaud Islands

Author (s): Alfred Noufie Mekel, Rudy Soenoko, Wahyono Suprapto and Anindito Purnowidodo

Abstract: The study of abaca strands from Sangihe Talud Islands North Sulawesi Indonesia has been developing for biocomposite materials. The aim of this research is to recognize abaca fiber's tensile strength, so that it could be prepared for biocomposite application. Average diameter of abaca fiber is 0.151 mm. The result of this research had given its maximum tensile strength of 189.24 MPa. It shows that abaca fiber is potential to be developed as alternative material in biocomposite.

Full Text

Title: Performance of three-bladed Archimedes screw turbine

Author (s): Tineke Saroinsong, Rudy Soenoko, Slamet Wahyudi and Mega N. Sasongko

Abstract: The study of Archimedes screw turbine as a micro-hydro power-plant is being developed in this decade. Screw turbine has some advantages, namely no need draft-tube, fish-friendly, and can be operated in low head (H<10 m). The aim of this research is to recognize the performance of Archimedes screw turbine due to flow rate effect and its slope and also to reveal flow phenomenon that occurred among blades of the screws. Physical model of the screw turbine was made with acrylic as represented laboratory scale. Geometrical shapes are three blades, screw angle of 300, ratio radius of 0.54, pitch of 2.4Ro. Measured and observed variables are turbine's rotation, torsion, and flow visualization with inlet flow rate variable (c0) are 0.3 m/s, 0.4 m/s, and 0.5 m/s, respectively. And the turbine's slope variables (a) are 250, 350, and 450. According to experimental data, the maximum turbine efficiency is 89% that occur at 0.5 m/s of flow rate and 250 of shaft slope. The result of this research reveals that the largest hydraulic power occurs in the turbine shaft's slope (a) of 450 in the amount of 16.97 with turbine's rotation of 350 rpm. Output power of screw turbine occurs in the turbine shaft's slope (a) of 450 in the amount of 5.11 watt and rotation of 182 rpm. The highest efficiency is 89% occur in turbine's rotation of 50 rpm in the turbine shaft's slope of 250 with y = 1R0. The result of this study show that the performance of the screw turbine is more maximum on the lower shaft's slope that automatically become better operating in low head and rotation.

Full Text

Title: The effect of the risk factors on the performance of contractors in Banda Aceh, indonesia

Author (s): Anita Rauzana

Abstract: In the implementation of construction projects, contractors often face the risk factors that may affect the performance and hinder the success of a construction project. Construction project is a mission, undertaken to create a unique facility, product or service within the specified scope, quality, time, and cost (Chitkara, 2004). Many contracting companies along with the advent of growing development in Banda Aceh to make the contractor should be able to maintain its performance in order to compete with other contractors. The purpose of this study to identify risk factors that have a frequency of occurrence is very frequent in the implementation of construction projects in Banda Aceh experienced contractor in the execution of construction projects in the Province of Aceh. Risk factors reviewed are a risk factor in the implementation of construction projects in general. The collection of primary data collected through the distribution of questionnaires to the respondents that the small non-qualified contractor in Banda Aceh. Performance contracting is a result of work accomplished by the contractor in carrying out a construction project. Contractor performance associated with risk factors gained during the performance of construction projects and can influence the success of a construction project itself. The main problem in this study is what the risk factors that can affect the performance of the contractor. Barcarini (2004) noted that construction projects are notorious for overrunning budgets because of unforeseen factors.

Full Text

Title: Efficient block codes for error correction using low density parity check codes

Author (s): M. Shyam, G. Sreekanth and V. Balamurugan

Abstract: This paper presents a novel high-speed BCH (hamming) decoder that corrects single-bit errors in parallel and multiple-bit errors corrects serial manner. The proposed decoder is constructed by a novel design and is suitable for nanoscale memory systems, in which multiple-bit errors occur at a probability comparable to single-bit errors and multiple errors occur at a higher probability. To prevent such soft or transient fault related attacks, we consider fault tolerance as a method of mitigation. Most of the current fault tolerant schemes are only multiple bit error detectable but not multiple bit error correctable. This paper also shows that the area, delay, and power overheads incurred by the proposed scheme are significantly lower than traditional fully parallelized BCH based hamming decoders capable of correcting any multiple bit error. This error detection and correction algorithm is synthesized and simulated by using XILINX ISE.

Full Text

Title: Hydrothermal extraction of Phytochemical compounds from Polygonum Cuspidatum roots in a semi- batch reactor system

Author (s): Siti Machmudah, Wahyudiono, Hideki Kanda and Motonobu Goto

Abstract: Hydrothermal extraction is known as a natural and green way for antioxidant compounds extraction. Antioxidant compounds from the roots of traditional Chinese medicinal herb Polygonum cuspidatum (P. cuspidatum) has been extracted at hydrothermal conditions. The antioxidant compounds were identified as polyphenolic compounds of resveratrol, rutin and quercetin. The effect of temperatures on the extraction yield of antioxidant compounds was studied. Based on the result, extraction yields of resveratrol, quercetin, and rutin significantly increased with increasing temperature at 10 MPa. After 180 min of extraction time, the yields of resveratrol, quercetin, and rutin were 0.95, 0.26, and 6.73 mg/g of feed loaded at 473 K, respectively. These results revealed that hydrothermal extraction is applicable method for the isolation of polyphenolic compounds from other types of biomass and may lead to an advanced plant biomass components extraction technology.

Full Text

Title: Hybrid prediction model for short term Wind speed forecasting

Author (s): M. C. Lavanya and S. Lakshmi

Abstract: Due to notable depletion of fuel, non-conventional energy aids the present grid for Power management across the country. Wind energy indeed has major contribution next to solar. Prediction of wind power is essential to integrate wind farms into the grid. Due to intermittency and variability of wind power, forecasting of wind behavior becomes intricate. Wind speed forecasting tools can resolve this issue as prediction of wind power depends on the forecasting of Wind speed. A hybrid model is proposed and developed using both Auto Regressive integrated Moving Average (ARIMA) and Artificial Neural Network (ANN) to achieve best forecast of Wind speed in a given region.

Full Text

Title: Green inhibitor for API 5L x65 steel in HCL 0.5 m

Author (s): Femiana Gapsari, R. Soenoko, A. Suprapto and W. Suprapto

Abstract: The research is the preliminary study of the ability of Cera alba (CA) extract inhibitors. The adsorption and corrosion inhibition characteristic of CA extract on API 5L X65 steel was investigated by weight loss and potentiodynamic polarization methods. The results showed that the inhibition efficiency increases with increasing inhibitor concentration. The weight loss and potentiodynamic polarization methods revealed that CA extract act as mixed type inhibitor.

Full Text

Title: Design and simulation of the SOLS technique applied for FM0, Manchester and miller encoding scheme

Author (s): R. Sangeetha Vani and M. R. Ebenezar Jebarani

Abstract: Encoding techniques are fetching important role in communication. Techniques like Miller, Manchester, and FM0 encoding are used in numerous applications. Each technique has different operations depends on their needs. Each and every encoding scheme are used without losing any of its parameters. This paper adopt similarity oriented logic simplification technique (SOLS technique) which merges architecture together and synchronize the operation and also DSRC technique is used to maintain the dc-balance and signal reliability. By applying both the techniques we can reduce the number of transistors and maintains the DC balance. The present work deals with obtaining an integrated architecture of FM0, Manchester and Miller encoding to overcome several drawbacks of traditional method. A universal asynchronous receiver/transmitter (UART) is used here to translate data between parallel and serial forms for communication. In this proposed approach the number of hardware components is reduced, hence results in the reduction of the overall area consumed with the added functionality in DSRC.

Full Text

Title: Real time FPGA implementation for video creation VGA Frame rate conversion system

Author (s): Umarani E. and Vino T.

Abstract: This paper introduces real time Full VGA display Frame rate conversion implemented on FPGA. By using the Frame rate conversion, we can display the Video game. This article gives a programming design of video game based on the FPGA using VHDL. The Game realized the function of the movement and rotation of blocks, randomly generating next blocks. The successful transplant of video game provides a template for the development of other visual control systems in the FPGA. This system improves the Quality of Video, can create Images and providing Animation to the Images and can control the system using Joy Stick, code in VHDL Language. Planning to add Encryption with the created video for Communication.

Full Text

Title: Analysis of outage probability, throughput in hybrid cognitive radio networks with and without transceiver impairments

Author (s): C. S. Preetham, M. Siva Ganga prasad, Ch. Abhinav, R. Monica and K. Harshitha

Abstract: Cognitive radios in wireless networks is the efficient way of sensing and accessing the spectrum dynamically. In this paper we analyze the outage probability and capacity of hybrid network model in cognitive radios considering transceiver impairments. Every physical device has hardware impairments which degrades the performance of the system. Majority of technical contributions in wireless communications neglect transceiver impairments, assuming ideal hardware. Transceiver impairments like IQ imbalance, phase noise etc. have greater effect on system performance. A hybrid overlay/underlay transmission scheme has been proposed. This transmission method takes the effect of transceiver impairments into consideration and finds the best channel; best relay and best relay power. In this we develop a simulation test model to evaluate the performance and outage probability of hybrid model considering transceiver impairments. The manuscript provides how the effect of hardware impairments can be modeled. The manuscript also provides the analysis of the proposed hybrid cognitive radio model with the help of a case study, which considers various practical aspects.

Full Text

Title: Advanced motion tracking based mobility assistance for physically disabled

Author (s): Satyanarayana P., Sai Prajwal K., Chandra Naga Varma T., Sri Manojna E. and Sitara S.

Abstract: In present-day scenario, many people aren't able to control powered wheel chair using various interfaces like joystick, head control or voice control. For this reason, a new image-processing based mobility assistance system is proposed in this paper that automatically tracks the leg movement of the assisting person and follows him accordingly. In addition to this, an eye tracking feature has been inculcated into the proposed system that would help the disabled person in controlling the movement of wheel-chair using eye movement in the absence of an assisting person. The leg tracking module has been devised using the background subtraction and CamShift algorithms while the eye-tracking module utilizes the Haar cascades along with the Daugman's algorithm to track the eye-movement.

Full Text

Title: Weight optimized dynamic hybrid fuzzy Jordan artificial neural network for intrusion detection

Author (s): A. Dhivya and S. N. Sivanandam

Abstract: A Dynamic Hybrid Fuzzy Jordan Artificial Neural Network finds the intrusion very efficiently in timely behaviour varied networks. The development of DHFJAN is to influence the behavior of dynamic systems to achieve the pre-determinate objectives. In DHFJAN, the number of hidden layer in neural and Jordan networks and number of nodes in each hidden layers are determined at runtime based on error obtained in the training stage. Generally neural network and Jordan network approaches are inherent nonlinear optimization problem, the quality of Hybrid network local solution is determined the weight initialization. Stability and weight convergence are important issues in the performance analysis of dynamic networks. The weight initialization and optimization of hybrid networks is not discussed in DHFJAN. This paper finds the optimal weight values of each layer by utilizing the optimization techniques to improve the performance and final representation of hybrid network. Many researches were focused on the weight optimization of neural network using various optimization algorithm the PSO is best among them. Since two networks available in hybrid network, applying PSO leads time consumption because the search space size of PSO. This paper proposes a modified PSO algorithm named as CCPSO with constrained search space and controlled convergence degree. The constrained search space is achieved by generating initial weight values based on power-law distribution and Zipf's law. Convergence degree of population in the PSO is controlled by analyzing mean and variance values of fitness in each iteration. The optimal weights are updated in hybrid dynamic network while neuron state changing. Thus the proposed approach improves the performance of dynamic hybrid fuzzy Jordan neural network and also reduces the error rate significantly. Experimental result shows that the proposed WDHFJANN is better than the DIHFJANN.

Full Text
