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Dr. Mohammad Valipour  
Associate Professor, Sari Agricultural Sciences and Natural Resources University, Sari, Iran

Dr. Prakash H. Patil  
Professor and Head, Department of Electronics and Tele Communication, Indira College of Engineering and Management Pune, India

Dr. Smolarek Malgorzata  
Associate Professor, Department of Institute of Management and Economics, High School of Humanitas in Sosnowiec, Wyższa Szkoła Humanitas Instytut Zarządzania i Ekonomii ul. Kilińskiego Sosnowiec Poland, India
Dr. Umakant Vyankatesh Kongre
Associate Professor, Department of Mechanical Engineering, Jawaharlal Darda Institute of Engineering and Technology, Yavatmal, Maharashtra, India

Dr. Niranjana S
Associate Professor, Department of Biomedical Engineering, Manipal Institute of Technology (MIT) Manipal University, Manipal, Karnataka, India

Dr. Naseema Khatoon
Associate Professor, Department of Chemistry, Integral University Lucknow (U.P), India

Dr. P. Samuel
Associate Professor, Department of English, KSR College of Engineering Tiruchengode – 637 215 Namakkal Dt. Tamilnadu, India

Dr. Mohammad Sajid
Associate Professor, Department of Mathematics, College of Engineering Qassim University Buraidah 51452, Al-Qassim Saudi Arabia

Dr. Sanjay Pachauri
Associate Professor, Department of Computer Science & Engineering, IMS Unison University Makkawala Greens Dehradun-248009 (UK)

Dr. S. Kishore Reddy
Professor, Department of School of Electrical & Computer Engineering, Adama Science & Technology University, Adama

Dr. Muthukumar Subramanyam
Professor, Department of Computer Science & Engineering, National Institute of Technology, Puducherry, India

Dr. Latika Kharb
Associate Professor, Faculty of Information Technology, Jagan Institute of Management Studies (JIMS), Rohini, Delhi, India

Dr. Kusum Yadav
Associate Professor, Department of Information Systems, College of Computer Engineering & Science Salman bin Abdulaziz University, Saudi Arabia

Dr. Preeti Gera
Assoc. Professor, Department of Computer Science & Engineering, Savera Group of Institutions, Farrukh Nagar, Gurgaon, India

Dr. Ajeet Kumar
Associate Professor, Department of Chemistry and Biomolecular Science, Clarkson University 8 Clarkson Avenue, New York

Dr. M. Jinnah S Mohamed
Associate Professor, Department of Mechanical Engineering, National College of Engineering, Maruthakulam.Tirunelveli, Tamil Nadu, India

Dr. Mostafa Eslami
Assistant Professor, Department of Mathematics, University of Mazandaran Babolsar, Iran

Dr. Akram Mohammad Hassan Elentably
Professor, Department of Economics of Maritime Transport, Faculty of Maritime Studies, Ports & Maritime Transport, King Abdul-Aziz University

Dr. Ebrahim Nohani
Associate Professor, Department of Hydraulic Structures, Dezful Branch, Islamic Azad University, Dezful, Iran

Dr. Aarti Tolia
Faculty, Prahaldbhai Dalmia Lions College of Commerce & Economics, Mumbai, India

Dr. Ramachandra C G
Professor & Head, Department of Marine Engineering, Srinivas Institute of Technology, Valachil, Mangalore-574143, India

Dr. G. Anandharaj
Associate Professor, Department of M.C.A, Ganadipathy Tulsi's Jain Engineering College, Chittoor- Cuddalore Road, Kaniyambadi, Vellore, Tamil Nadu, India
Authors: Greeshma T S, Subu Surendren

Paper Title: Community Detection on Social Network – A Survey

Abstract: Social network is an important application in the internet which represent the geographically dispersed users. Social network provides a variety of methods for explaining patterns and entities. Social networks are mostly represented as graphs, which contain nodes and edges. Nodes are used to represent actors such as people and organizations whereas edges show the relationship between these nodes. Several data sources involved in the social network forms communities which work in self-descriptive manner. A collection of nodes which are connected by edges with high similarity is called a community. The community detection in social network, intend to partition the graph with dense region which correspond to closely related entities. The selection of data sources and determination of community detection approaches can enhance the accuracy, efficiency and scalability of community. In this survey, different community detection approaches are discussed.

Keywords: social network, community detection, community structure

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Authors: Diejo Jara, Estefania Salinas, Julio Romero, Michael Valarezo

Paper Title: Mathematical Modeling to Establish the Balance of Heat in a Capacitor

Abstract: The teaching-learning process in the field of exact sciences strengthened by the practical activity of a technological nature, in which to facilitate the safe reasoning and concise leads to the application of principles of physics and chemistry as well as updating processes industrial in the field of Mining, Pulp, Forest, Food, Chemical and Process. Which have potentiated a high degree of modelling and automation? This automation involves some advantages that have just moved to the quality and improvement of the final product. In this case, establishing the heat balance in a capacitor. Includes ensure both a more competitive cost and simultaneously strengthening formation activity and the mathematical model to determine the hot balance in a capacitor means using parameters dependent pressure define variables as the volume of water and the amount of steam saturation entry and quantified by developed and simplified quantification and analysis of material balance equations. Thus, in this article the calculations used are presented to establish the mathematical modeling for the heat balance in a capacitor, for it was selected and implemented, with teams making and data records, pointing to possible strategies to conceive established the study of the processes of heat transfer and control systems as an integral part of an automation project

Keywords: Automation, analytical calculation, mathematical modelling, analytical, design and construction.

References:
3. References:

communication, control system, signal processing etc. Knowing the present condition of the system is critical for signal processing applications and hence more accurate state estimation is important. State of the system along with information about the network topology will give complete information about the power grid network. In this paper the network topology is modeled using the MATPOWER package, a powerful software package of MATLAB. Weighted Least Square (WLS) state estimation is used to develop equations and algorithms for state estimation. The linear state estimation problem is formulated with linear methods using phasor measurement unit (PMU) data. The measurements which are included in the observation vector and also the size of the system (given by number of busses in the system) are important and these features affect the accuracy of the system state estimate. In this paper, state estimates of IEEE standard bus system of different size are stimulated using MATPOWER package. Also state estimates are stimulated, with different measurement parameters in the observation vector and the stimulation result obtained are compared.

Keywords: Smart Grid, State Estimation, Weighted Least Square Estimation, Modeling of Smart Grid.

References:

Authors: Hamdy Mohamed Soliman

Paper Title: Sinusoidal PWM to Drive the Induction Motor with Reducing the Torque Ripple and THD

Abstract: Three phase voltage source inverter are widely used to drive the AC motors as the induction motor. There are many techniques to make the inverter reliable to treatment the AC motor. From among these techniques, the sinusoidal pulse width modulation. The paper used this technique due to have some advantages as, reduce the total harmonic distortion and torque ripples. Also in this Paper the open and closed loop scalar controls with the sinusoidal pulse width modulation are compared to show the advantages of the closed loop control. The torque ripples and total harmonic distortions is calculated through many modulation index. The PI current controlled is added to the closed loop drive system to minimize the torque ripple and total harmonic distortion this is to show the effect of adding these PI's on the performance overall.

Keywords: Induction motor, PI controller, Scalar control and SPWM.

References:

Authors: Abhishek Pratap Singh, Manoj Gupta

Paper Title: Robust Performance Comparison of Unstable Videos and their Quality Improvement Implementing Block-Based Frame Matching Technique for Obtaining Digital Video Stabilization

Abstract: In the context of Digital Image stabilization (DIS), based on morphological frame division and comparing, to estimate matching between local and global motion vectors by the means of averaging pixel information
of frames; surprisingly proposes an indispensable Digital video stabilization (DVS) technique which can enhance the quality of an input video stream. Videos captured by hand-held devices (e.g. Cell phones, portable camcorders etc.) sometimes appear remarkably shaky hence Digital video stabilization technique can be implemented to refine the video quality by removing unwanted jitters. It’s an important step for several video processing amenities to acquire video stream without intervening jerkiness, eliminating unnecessary camera movements and withdrawing the superfluous inter frame motion between two successive frames. In order to get the stabilized video sequence, first promising step is to check the validity of local motion vector (LMV), and finally global motion vector (GMV) is obtained by averaging to further enhance the reliability. Here low pass filters and moving average filters are used for smoothing estimated motion vectors to get a stabilized sequence. Experiments show that this video stabilization technique is an efficient method to stabilize the input unstable video stream. In this paper we study the digital video stabilization technique with the use of keen motion estimation and finally performance comparison and conclusion of un-stabilized and stabilized video sequence with the efficacy of our technique of digital video stabilization.

**Keywords:** Digital Video Stabilization (DVS), Digital Image Stabilization (DIS), Inter Frame Motion, Local Motion Vector (LMV), Global Motion vector (GV).

**References:**


Authors: Mohammed Khalid, P. Sajith Sethu

**Paper Title:** Video Denoising using Surfacutelet Transform By Optimised Entropy Thresholding

**Abstract:** The primary aim of all video denoising systems is to remove noise from a corrupted video sequence. A video is corrupted often due to the limitations of the acquisition and processing devices. Most of the conventional video denoising schemes employ the technique of motion estimation or the optical flow estimation. Motion estimation is mostly an arduous technique particularly in conditions with lighting variations. Motion estimation step is also worsened due to the aperture problem of the optical flow estimation. This limitation of motion estimation paved the way for wavelet transform based video denoising techniques. Unfortunately, those systems resulted in videos with jittery edges and curves. Surfacutelet transform is a potential tool used for the processing of multidimensional data. Video signals, which can be dealt as a different type of 3D signal, can be processed using surfacutelet transform which preserves the visual quality and edge information. Entropy thresholding optimized using Artificial Bee Colony(ABC) is used to threshold the surfacutelet coefficients which can be used to reconstruct the video signal with improved visual quality and with a higher peak signal to noise ratio(PSNR) and structural similarity(SSIM) index.
Keywords: Surfacelet transform, Artificial Bee Colony Algorithm, Entropy Threshold, NDFB, PSNR, SSIM

References:

Authors: Madhuri Mhaske, Sachin Patil

Paper Title: An Image Reranking Model Based on Attributes and Visual Features Eliminating Duplication

Abstract: An image search on internet is increasing day by day. Users type keywords in various search engines like Google, Yahoo, Bing etc for retrieval of relevant images. These search engines search the images from large pool of database. But as the keywords entered by user are generally short and ambiguous, different kinds of images are retrieved and sometimes these results are irrelevant. In this paper, semantic approach is proposed to solve this ambiguity. An image search reranking is definitely a superior approach over the text based image search. Using single modality for image searching is not sufficient as the different images have different features. This paper considers both the textual features as well as visual features for reranking. Attributes of images are classified into the groups. Based on those attributes from classifiers and the visual features of the images, each image is represented. The ranking score is used to evaluate the relevance of the image with query image. Hypergraph models these images based on the ranking scores. Content based image retrieval (CBIR) technique is used for extracting visual features. CBIR focuses on the content of the images such as color, texture, shape or any other information related with the images. Duplicate image results are detected and eliminated by using SURF (Speeded Up Robust Feature) technique.

Keywords: Attribute, Hypergraph, CBIR, SURF, Etc

References:
Abstract: This article discusses the identification of the crushing process, which is widely used in copper mining; this is done using the ident tool with MATLAB®. Then apply two strategies to control process one based on PID (Proportional out, integral, derivative) and another on the Smith Predictor, mainly by the big current delay in the process. Finally, the best option is chosen, and the results were shown.

Keywords: Identification Systems, PID control, Smith Predictor Control.

References:
Analytic Hierachy Process based Methodology for Ranking Healthcare Management Information Systems

Abstract: Ranking of Healthcare Management Information System (HMIS) help practitioners to select the best from the trivial many for the success of the organization. The objective of this study is to rank the CSF of HMIS using a suitable Multi-Criteria Decision Making technique (MCDM). Here, Analytic Hierarchy Process (AHP) is the tool used to determine the relative importance of the CSF in influencing the adoption and use of HMIS. In order to rank the factors, this study is planned and performed in two stages. At the first stage to identify the critical success factors of HMIS, a through literature review is made. At the second stage, a pair wise comparison is designed based on AHP method. The weightage got from AHP can also be used for ranking of various HMIS installations in different hospitals.

Keywords: Critical Success Factors, Healthcare Management Information System, Multi Criteria Decision Making, Analytic Hierarchy Process.

References:


Many developed countries in line with the increase in road transport, and consequently an increase in the rate of accidents, conventional methods which generally based on regression analysis are used. However, these methods only detect accidents in different roads, but cannot clearly identify the cause of accidents and define the relationship between them. In addition, the methods used have two major limitations: 1- Postulate the...
structure of the model, and, 2- Observability of all variables. Due to the limitations discussed and also due to the complex nature of human factors, and the impact of road conditions, vehicle and environment on human factors, the aim of this study is to provide a useful tool for defining and measuring road, traffic and human factors, to evaluate the effect of each of them in accidents which caused by carelessness, directly and indirectly by using structural equation modeling with the partial least squares approach. Compared with the regression-based techniques or methods of pattern recognition that only a layer of relationships between independent and dependent variables is determined, the SEM approach provides the possibility of modeling the relationships between multiple independent and dependent structures. Moreover, the ability to use unobservable hidden variables, by using observable variables would be possible.

Keywords: Human factors, Road safety, Road factors; accident analysis; Partial Least Square (PLS); Structural Equation Modeling (SEM).

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32. Huang Jun-Chih. Research of the Taiwan Fujian area road traffic accident, National Central University, Department of Graduate Institute of Statistics, 2006. Master paper.
16. Performance of Single Carrier Frequency Division Multiple Access Under Different Channel Cases

**Abstract:** Single Carrier Frequency Division Multiple Access (SCFDMA) is currently a favorable tool for uplink broadcast in 4G mobile communications method. It merges the “single carrier frequency domain equalization (SC-FDE)” and “frequency division multiple access (FDMA)” methods. It inserts DFT before OFDMA modulation to drawing the sign from every operator to a subsection of the existing subcarriers. It is a new system joining best of the benefits of OFDMA with the small “Peak-to-Average Power Ratio (PAPR)”. For that aims, it accepted as a promising technique on the uplink of wireless systems. In this paper the performance of SCFDMA was measured under different variable parameter in order to verify the robustness of the system. The system is tested under parameters like modulation type, subcarrier mapping, Doppler frequency, time of sample, second path gain and roll-off factor.

**Keywords:** SCFDMA, 4G, PAPR, BER, SNR.

**References:**


17. Comparison PID and MPC Control, Applied to a Binary Distillation Column

**Abstract:** Using binary distillation column in the industry is currently imperative, the reason why the control parameters that are highly nonlinear necessary to apply classic strategies as advanced control and raised here. These techniques are the PID controller and the MPC; the data that are to perform the calculations are of IFAC event which their mixture is alcohol with water. Finally with the help of software MATLAB® / Simulink simulations for comparing which of the two drivers is the best delivery results when controlling the composition on the bottom, top and pressure in binary distillation column performed.
Keywords: Chemical Industry, Distillation Columns, MPC (Predictive Control Method), PID Control.

References:

Authors: Sonal Yadav, Sharath Naik

Paper Title: Shortest Path Computation in Multicast Network with Multicast Capable and Incapable Delay Associated Nodes

Abstract: Multicast transmission results in a bandwidth and cost efficient solution for transmission purpose .If we consider the real life scenario then the nodes considered can either be multicast capable nodes or multicast incapable nodes. In this paper, a method is proposed to increase the success rate of finding the minimum cost path within a given network with both multicast capable and capable nodes. For this, a real life network is considered with 80 nodes complied within it. The nodes considered can either be multicast capable nodes or multicast capable nodes conforming with real life situations .It is shown that if we make use of algorithm proposed in the paper along with delay association and proper bandwidth consideration then success rate of finding the minimum cost path can be increased up to a significant value.

Keywords: Multicast capable nodes, multicast incapable nodes, minimum cost path

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Comparative Experimental study on a Photovoltaic Panel with Low Cost Performance Improvement Techniques

Abstract: The main objective of our project is to increase the efficiency of the solar panel by removing the heat from it. The photovoltaic (PV) cells suffer efficiency drop as their operating temperature increases especially under high insolation levels. The operating temperature is one of the important factors that can affect the efficiency of the PV panels. We rectified this problem by using two techniques which reduces the temperature of the panel. One is cooling the solar panel by water where heat transfer takes place and reduces the panel temperature and the other is placing the Low E-glass which allows only visible light and reflects the non-visible light. In the solar spectrum heat is produced due to non-visible light, temperature of solar panel is reduced by the reflection of non-visible light. Decrease in temperature of the solar panel results increase in the efficiency.

Keywords: Photovoltaic (PV) cells, Efficiency, Cooling, Resistance temperature detector, low E-glass.

References:

An Efficient Depth Segmentation Based Conversion of 2d Images to 3d Images

Abstract: In the 3D consumer electronics world have a wide increase in demands of more and more 3D technology, so this has led to the conversion of many existing two-dimensional images to three-dimensional images. The depth is an important factor in the conversion process. Determining the depth for a single image is very difficult. There are many techniques widely used for the depth estimation process. In this paper we propose an automatic depth estimation technique. Firstly, we partition the image using graph cut segmentation method. The main goal of segmentation is to simplify or change the representation of an image into something that is more meaningful and easier to analyze. Then we construct a higher order statistics map. The HOS is mainly used for solving detection and classification problems. We can estimate depth map from HOS mean. Finally, creating left view image and right view image and combined with depth map to generate an enhanced stereoscopic image.

Keywords: 2D to 3D, Segmentation, Graph cut, HOS, Filtering, Stereoscopic image.

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Authors: Chanchal Verma, B. Anjanee Kumar

Paper Title: Improvement of Output Power for Wind Driven Induction Generator using SEPIC Converter

Abstract: This paper deals with dc-dc converter known as SEPIC stands for single ended primary inductor converter. SEPIC is integrated with wind energy in order to maximize the performance of the system. With the help of simple method of tracking maximum power from wind energy to extract maximum power. Basically wind energy is used to generate electricity and the wind is not in uniform speed. So, by using different electronic components. The main part is dc-dc converter and by using SEPIC in place of normal dc-dc converter the output power i.e. THD will enhanced. Here DBR is used to convert AC to DC. The SEPIC can perform both functions as well as boost converter. It gives the result in microseconds. The simple algorithm is the main advantage of the proposed work. The output is shown in DC microgrid and AC microgrid. It is for the small scale WECS. The work is supported with experimental results and also the output i.e. THD is calculated and compared with Cuk converter.

Keywords: MPPT, SEPIC (single ended primary inductor converter), THD, wind energy.

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Authors: Joseph Zacharias, Celine George, Vijayakumar Narayanan

Paper Title: Hybrid Wired and Wireless System Involving Non-upling Technique

Abstract: A hybrid Radio over Fiber (RoF) system which is compatible with both wired and 90 GHz wireless transmission is proposed in this paper. Baseband and millimeter wave signals are considered as wired and wireless signal respectively. Hybrid signal consisting of wired and wireless signal is generated using a single Dual Drive Mach-Zehnder Modulator (MZM). Using a 10 GHz local oscillator, non-upling (nine times) increase in signal is achieved. As the system uses low frequency local oscillator and a single modulator, output of the system can be reduced considerably. Results obtained show that the system can transmit both wired and wireless signals over a fiber of length 70 km with acceptable bit error rate (BER).

Keywords: Fiber-to-the-Home, Radio-over-Fiber, W-Band

References:

Authors: J. Sririvasan, S. Audithan

Paper Title: Anonymous Secure Routing Protocol for Multi hop Wireless Mesh Network (ASRP)

Abstract: Anonymous communications are important for many applications of the Wireless Mesh Networks (WMNs) deployed in adversary environments. A major requirement on the network is to provide unidentifiability and unlinkability for nodes and their traffics. The existing protocols are vulnerable to the attacks of fake routing packets or
denial-of-service (DoS) broad-casting, even the node identities are protected by pseudonyms. In this paper, we propose Anonymous Secure Routing Protocol for Multi hop Wireless Mesh Network (ASRP) to protect the attacks and multi hop secure data transmission in WMN. ASRP offers anonymous connections that are strongly resistant to both eavesdropping and traffic analysis. The key-encrypted onion routing is designed to prevent intermediate nodes from inferring a real receiver node. Simulation results indicate that the efficiency of the proposed ASRP protocol with improved performance as compared to the existing protocols.

Keywords: Anonymous, Onion Routing, Encryption, Decryption, Wireless Mesh Networks.

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Authors: Aleena Xavier T, Rejimoan R.

Paper Title: A Particle Swarm Optimization Approach With Migration for Resource Allocation in Cloud

Abstract: Cloud computing is an emerging technology. The main motivation behind the proposed work is to design a Cloud Broker for efficiently managing cloud resources and to complete the jobs within a deadline. The proposed approach intends to achieve the objectives of reducing execution time, cost and workload based on the defined fitness function. The work is simulated in CloudSim and the results prove the effectiveness of the proposed work. A better allocation was achieved when all of the three factors were considered. The analysis of work was done by comparing one of the previous works where only time and cost were the objectives. By plotting a graph against Response time and deadline and another graph depicting the relation between the idle time and deadline this result has been proved.

Keywords: Resource allocation, Job scheduling, Cloud Computing, IaaS, Particle Swarm Optimization

References:

Authors: C. Ramachandra, Sarat Kumar Dash
Abstract: ESD induced reliability problems in an IC have been studied in detail. PEM (Photon Emission Microscopy) analysis has indicated characteristic emission spots at same location from all the failed devices. Reprocessing of the failed device reveals Gate oxide rupture as root cause of the failure. Protection circuits have been designed to prevent ESD induced damage to the devices. The devices are found to be safe till 4500 V stress after protection circuit is implemented.

Keywords: ESD (Electro Static Discharge), HBM (Human Body Model), PEM (Photon Emission Microscope), BPSG (Boron Phosphorous silicate glass)

References:

Authors:
Neethu.M.S, Jayalekshmi.S

Paper Title: Dependency Based Scheme for Load Balancing in Cloud Environment

Abstract: Cloud computing provides an opportunity to dynamically share the resources among the users through virtualization technology. In this paper, a scheme for load balancing is proposed on the basis of dependency among the tasks. CMS consists of three algorithms including Credit-based scheduling for independent tasks, Migrating Task and Staged Task Migration for dependent tasks. The Credit-based method is used for scheduling the independent tasks considering both user priority and task length. Each task will be assigned a credit based on their task length and its priority. In the actual scheduling of the task, these credits values will be considered. Task Migration algorithm is used to guarantee balancing of loads among the virtual machines. Task migration is done such that the tasks get migrated from heavily loaded machines to comparatively lighter ones. Thus, no rescheduling is required. For dependent tasks, the dependencies between tasks are considered and the technique termed as data shuffling is used. In data shuffling, a job is divided into several tasks according to the execution order. The method used here is that the tasks in one stage run independently, while the tasks in different stages must be executed serially. Finally the system is simulated and experiments are conducted to evaluate the proposed methods. This work also concentrates on a simulated study among some common scheduling algorithms in cloud computing on the basis of the response time. The algorithms compared with the work includes: Random, Random Two Choices (R2C) and On-demand algorithms. The evaluations demonstrate that Credit-based scheduling algorithm significantly reduces the response time.

Keywords: Load Balancing, Virtual Machine, Task Scheduling, Dependency.

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Authors: Sharafunisa S, Smitha E S
Paper Title: Reversible Watermarking Technique for Relational Data using Ant Colony Optimization and Encryption

Abstract: Data is stored in different digital formats such as images, audio, video, natural language texts and relational data. Relational data in particular is shared extensively by the owners with communities for research purpose and in virtual storage locations in the cloud. The purpose is to work in a collaborative environment where data is openly available for decision making and knowledge extraction process. So there is a need to protect these data from various threats like ownership claiming, piracy, theft, etc. Watermarking is a solution to overcome these issues. Watermark is considered to be some kind of information that is embedded into the underlying data. While embedding the watermark, the data may modify, to overcome this we use reversible watermarking in which owner can recover the data after watermarking. In this paper, a reversible watermarking for relational data has been proposed that uses ant colony optimization and encryption for more accuracy and security.

Keywords: Ant colony optimization (ACO), Mutual information (MI), Reversible watermarking, Data recovery, Genetic Algorithm (GA).

References:

Authors: Jasher Nisa A J, Sumithra M D
Paper Title: Adaptive Minimum Classification Error based KISS Metric Learning for Person Re-identification

Abstract: Person re-identification becoming an interesting research area in the field of video surveillance and is taken as the area of intense research in the past few years. It is the task of identifying a person from a camera image, who is already been tracked by another camera image at different time at different location. Manual re-identification in large camera network is costly and mostly of inaccurate due to large number of camera that he had to simultaneously operate. In a crowded and unclear environment, when cameras are at a lengthy distance, face recognition is not operate. In a crowded and unclear environment, when cameras are at a lengthy distance, face recognition is not possible due to insufficient image quality. So, visual features based on appearance of people, using their clothing, objects carried etc. can be exploited more reliably for re-identification. A person’s appearance can change between different camera views, if there is large changes in view angle, lighting, background and occlusion, so visual feature extraction is not possible accurately. For solving a person re-identification problem, have to focus on “developing feature representations which are discriminative for identity, but invariant to view angle and lighting”. Recently, Minimum Classification Error (MCE) based KISS metric learning is considered as one of the top level algorithm for person re-identification. It uses VIPeR feature set as input, which contains the extracted features. MCE-KISS is more reliable with increasing the number of training samples. It uses the smoothing technique and MCE criteria to improve the accuracy of estimate of eigen values of covariance metrics. The smoothing technique can compensate for the decrease in performance which arose from the estimate errors of small eigenvalues. Here, the value of average number of small eigen values of the covariance metrics is set as a constant. So it does not work well for a large number of samples. In such situation, introduce a new method to find the value of average of such small eigen values by maximizing the likelihood function. The new scheme is termed as Adaptive MCE-KISS and conduct validation experiments on VIPeR feature dataset.

Keywords: reidentification, matric learning, covariance matrices, likelihood method.
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Authors: Rita Anitasari, Rizki Fitriani, Erna Triastuti, Alief Makmuri Hartono, Totok R. Biyanto
Paper Title: Converting Fuel Oil to Gas in Combustion System for CO2 Emission Mitigation at PT. PJB UP Gresik

Abstract: In environmental point of view, natural gas is the cleanest of the fossil fuels. The combustion of natural gas releases virtually no sulphur dioxide and ash or particulate matter, and very small amounts of nitrogen oxides. Natural gas emits 22% less carbon dioxide than oil and 40% less than coal. NOx is reduced by more than 90% and SOx by more than 95%. This paper will describes the effort of PT. PJB UP Gresik as the owner of the biggest steam power plant in Indonesia to reduce the CO2 emission by converting fuel oil to gas at existing steam power plant fuel system. In order to achieve operating conditions that assure mass, energy and momentum balance, some plant modifications and new installation were performed in combustion system area. The effort was performed successfully. The evidents were compare with the same powerplant in the world. In term of CO2 emission, PT. PJB UP Gressik lay at the best ten compared to others power plant performance in America. It is shown PT. PJB UP Gresik have been performing best green technology especially in reducing CO2 emission in the steam power plant by utilize fuel gas.

Keywords: CO2 Emission, Mitigation, Combustion System, Converting Fuel Oil to Gas

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Authors: Nikhila A, Janisha A
Paper Title: Lossless Visual Cryptography in Digital Image Sharing

Abstract: Security has gained a lot of importance as information technology is widely used. Cryptography refers to the study of mathematical techniques and related aspects of Information security. Visual cryptography is a secret sharing scheme which uses images distributed as shares such that, when the shares are superimposed, a hidden secret image is revealed. Visual cryptography schemes (VCSs) generate random and meaningless shares to share and protect secret images. The main issue in visual cryptography is quality of reconstructed image. The secret image is converted into shares; that mean black and white pixel images. There occurs an issue of transmission loss and also the possibility of the invader attack when the shares are passed within the same network. In this paper, a lossless TVC (LTVC) scheme that hides multiple secret images without affecting the quality of the original secret image is considered. An optimization model that is based on the visual quality requirement is proposed. The loss of image quality is less compared to other visual cryptographic schemes. The experimental results indicate that the display quality of the recovered image is superior to that of previous papers. In addition, it has many specific advantages against the well-known VCSs. Experimental results show that the proposed approach is an excellent solution for solving the transmission risk problem for the Visual Secret Sharing (VSS) schemes.

Keywords: visual cryptography, visual secret sharing.
Abstract: Clinical Data Mining involves the process of extracting, analyzing and finding the available data for clinical decision making. Mining data from clinical data set is not an easy task as they are inserted manually. In this paper, a solution for accurately predicting the presence or absence of hepatitis is proposed. The proposed technique is applied on clinical data sets taken from University of California at Irvine (UCI) machine learning repository. The proposed system contains two main subsystems for preprocessing and classifying. In the preprocessing subsystem the missing values in the data set is handled using missing data imputation methods like itwise deletion or mean/mode imputation method. If the percentage of missing values in a tuple is greater than 25%, then the tuple is rejected from the dataset else it was imputed by the most frequently used value. After handling the missing value, the relevant attributes are selected using meta-heuristic approaches like Particle Swarm Optimization (PSO) is used for feature selection. The reducts obtained after preprocessing are fed into the classification. In the classification subsystem the selected reducts are trained and tested using back propagation neural network. This paper aims at accurate prediction of diseases by analyzing clinical data sets.

Keywords: Back propagation neural network, Clinical Data Mining, Particle Swarm Optimization (PSO), University of California at Irvine (UCI).

References:

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Morocco, like all developing countries, has understood the importance using and integrating ICT in the education system. The ICT are tools and resources required by the National Education programs to support teachers in their courses while increasing student understanding. The Ministry of Education (MEN) has made significant efforts to equip schools with computers. The objective of this work is to show the level of employment of ICT to Moroccan schools and what can still impede its use. For this reason, we conducted a survey on high school teachers, to measure the degree of use of digital resources.
The analysis of our survey showed that more than half of high school teachers use digital resources as a teaching aid for the lessons of physical sciences. However, some teachers who have not benefited from ICT training by the department do not use digital resources in their course or not enough. Despite the MEN having made some digital resources available, these teachers do not know how to exploit them. Some teachers who have many years of experience in teaching think wasting time using ICT.

**Keywords:** ICT, digital resources, secondary education, Moroccan schools.

**References:**
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**Authors:** S. S. Sutar, A.V. Sutar, M. R. Rawal

**Paper Title:** Torque Measurement in Epicyclic Gear Train

**Abstract:** Gears are used to transmit power and rotary motion from the source to its application with or without change of speed or direction. Gears trains are mostly used to transmit torque and angular velocity from one shaft to another shaft, whenever there is large speed reduction requirement within confined space. In epicyclic gear trains there is relative motion between axes which useful to transmit very high velocity ratio with gears of smaller sizes in lesser space. In this research paper torque calculations are done for epicyclic gear train. Input torque, output torque and holding to torque are calculated experimentally using experimental set up and analytically using tabular formulas for rpm range starting from 1000 rpm to 2800 rpm. Finally the experimental and analytical torque values are compared which shows error ranging from 6 % to 8% which is due to some frictional losses and mechanical losses.

**Keywords:** Epicyclic gear train, output torque, holding torque.

References:

**Authors:** A.V. Sutar, S.S.Sutar, J.J. Shinde, S.S. Lohar

**Paper Title:** Combined Operation Boring Bar

**Abstract:** This paper presents a new methodology for the combined operation boring bar. In normal boring operation it requires to replace the tool various operations. We cannot perform multiple operations on one machining tool. So it creates problems: Timeconsumption in changing of tool, cost of different tool, required for various operation. The focus of this research is the operation can be done on the same boring bar. It can able to perform various operation such as rough boring, finish boring, chamfering and spot facing, Which is not possible with conventional machine tool.

**Keywords:** Special purpose machine, Combine operations, Boring Bar

References:

**Authors:** M. Raju, N. Seetharamaiah, A.M.K. Prasad

**Paper Title:** Characterization of Hydro-Carbon Based Magneto-Rheological Fluid (MRF)

**Abstract:** Magneto-rheological fluids (or simply “MR” fluids) belong to the class of controllable fluids. The
essential characteristic of MR fluids is their ability to reversibly change from free-flowing, linear viscous liquids to semi-solids having controllable yield strength in milliseconds when exposed to a magnetic field. This feature provides simple, quiet, rapid response interfaces between electronic controls and mechanical systems. MR fluid dampers are relatively new semi-active devices that utilize MR fluids to provide controllable damping forces. The focus of this work is to synthesize and characterize the MR fluids. The first phase of the work (i.e., synthesis) involves the mixture of carrier fluid, iron particles and additives in measured quantities to form an MR fluid. This is then followed by the second phase (i.e., characterization) where the synthesized MR fluids are characterized using a suitable damper to obtain the force-velocity, pressure-velocity and variable input current behavior.

**Keywords:** Synthesis, Characterization, MR Fluids, MR Damper

**References:**


**Authors:** Hazeena A J, Suminol L

**Paper Title:** An Improved Calibration Specific Self Localization Routing Protocol in Wireless Sensor Networks

**Abstract:** Localization problem is inevitable to maintain flawless performance of the Wireless Sensor Networks (WSN) which are typically based on accurate location of the sensor nodes. Sensor nodes are distributed randomly and there is no supporting infrastructure to manage after deployment. Various localization algorithms were implemented to empower the optimized discovery of the node with Maximum Likelihood (ML) and high degree of precision in routing protocols. Typical strategies were employed to improve the sensor location information by discarding the structural errors generated during the process estimation via calibration schemes in localization algorithms. Certain technologies are concentrated on either implementing calibration methods or optional error detection schemes by using Maximum likelihood methods. The proposed scheme uses a calibration method in self Localization algorithm with an augmented routing protocol to obtain the optimized location of the sensor nodes. This method is enhanced from the AODV Routing Protocol provided with an iterative calibration method which accurately estimates the localization information based on the likelihood calculated previously and comparing the relative location with the reference node position. After ascertaining the minimal error in relativity parameter the routing protocol updates the optimal location and then establishing normal routing with other nodes. The efficiency and throughput analysis is estimated using the network simulator version 3.2.4. The proposed calibration scheme is efficient for sensitive sensor platforms to improve the performance characteristics of sensor networks.

**Keywords:** WSN, Decentralized localization, RSSI, TDOA , AoA , ML, Calibration Scheme ,Node Filtering, AODV

**References:**


Authors: Kiran Mohan M. S, Jayasudha J. S.

Paper Title: Prevention of Denial of Service Attacks using Multimatch Packet Classification

Abstract: The growth of enterprise networks demands better security and quality of service. The denial of service attacks mainly focuses on the network resources or a service of a host, thereby prevent the service is being available to the normal users. This paper describes a method that effectively prevents the denial of service attack with the help of multimatch packet classification. The method uses multimatch packet classification for identifying the multiple matches and thereby determines the different flow of traffic. The packet migration is enforced to limit the flow of suspected packets and thus the attacking packet flow can be limited while the normal users unaffected. The method effectively prevents denial of service attack. The multimatch classification works at high speed by identifying and isolating the attacking flows.

Keywords: Routers, packet classification, multiple match, denial of service

References:

Authors: Ramitha A T, Jayasudha J S

Paper Title: Enhanced Personalized Web Search using Pattern-based Topic Modelling

Abstract: Personalized Web Search is a method of searching to improve the quality and accuracy of web search. It has gained much attention recently. The main goal of personalized web search is to customize search results that are more relevant and tailored to the user interests. Effective personalization needs collecting and aggregating user information that can be private or general. Personalized search results can be improved by information filtering. Information Filtering is a system to remove irrelevant or unwanted information from an information stream based on document representations which represent users’ interest. Traditional information filtering models assume that one user is only interested in a single topic. In statistical topic modelling documents and collections can be represented by word distributions. But directly applying topic models for information filtering is insufficient to distinctively represent documents with different semantic content. In order to alleviate these problems, patterns are used to represent topics for information filtering. Pattern-based representations are considered more meaningful and more accurate to represent topics than word-based representations. Pattern-based Topic Model (PBTM) combines pattern mining with statistical
topic modelling to generate more discriminative and semantic rich topic representations. In the proposed system, user information preferences are acquired as a collection of documents from user browsing history. Latent Dirichlet Allocation is used to perform topic modelling on the collected documents. Word-topic assignments from LDA are used for constructing transactional dataset. Frequent patterns are discovered from topic models. Maximum matched Pattern-based Topic Model is used to build user interest model representing the user preference information from the collection of documents and filter the incoming documents based on the user preferences by document relevance ranking.

Keywords: Topic model, Information filtering, Pattern based mining, User interest model

References:

Authors: Avinash Tiwari, Anju Malik, C.P. Singh

Paper Title: Identification of Critical Factors Affecting Construction Labor Productivity in India Using AHP

Abstract: Construction sector plays a leading role in economic growth for countries all around the world. Since construction is a labor intensive industry, productivity is considered a primary driving force for economic development. In India, the economy is severely challenged by the combined effects of rapid population growth and the closure policy imposed on the area since 2007. Owing to this situation, construction projects are characterized by low profit margin, time and cost overrun making labor productivity a key component of company’s success and competitiveness The main aim of this study is to identify key factors affecting labor productivity in India and to give the ranking to those factors by Analytical hierarchy process. By reviewing the literature and conducting depth interviews with experienced engineers, twenty five critical factors related to labor productivity were identified and categorized into six groups: Psychological, Human/labor, Design, Technological, Managerial and External factors. Based on the Analytical Hierarchy Process approach, a questionnaire was designed and delivered to 72 construction professionals to elicit the view on how labor productivity might be affected. A total of 35 feedbacks were analyzed and the results indicated that Shortage of material, Clarity of technical specifications, payment delay, site layout & construction methods have a significant impact on construction labor productivity in India.

DOl:

Keywords: Productivity; CLP; labor productivity; Identification of Critical factor; Critical factors; Construction project; Ranking of factors affecting productivity; Factor affecting productivity; Analytical Hierarchy process.

References:


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23. Rajen B. Mistry1, Mr. Vyom B. Pathak, Dr. Neeraj D. Sharma3 "Factors affecting masonry productivity." Journal of Construction Engineering and Management, 120(1), 228-239.


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Authors: Md Aleemuddin Ghori, Syed Abdul Sattar

Paper Title: Secured Packet Level Authentication Scheme for Code Update in Multihop WSN

Abstract: Wireless sensor network is an imminent technology and is getting Popularity quickly and a lot of attention because of their low cost solutions and capable to implement in military as well as for civilians. This technology has many applications as well as several environmental monitoring target tracking scientific exploration patient monitoring and data acquisition in hazardous environments. In Wireless Sensor Networks These tiny sensor nodes are deployed randomly in a hostile environment to collect sensor data and hence they are susceptible to outsider attacks therefore security is an important issue. Several security schemes have been proposed to provide the authenticity and integrity for network programming applications but they are either lacking the data confidentiality or they are not energy efficient as they are based on digital signature. So still there is a need to design a security Scheme to Enhanced the existing security mechanism for providing the authenticity and integrity of program updates in existing network programming protocols.

Keywords: Wireless, Networks, imminent technology, program updates in existing

References:


5. Anurag Gupta1, Dr. Kansal2 M.E. Student Civil Department MITS Gwalior 474005 "Improvement of Construction Labour Productivity in Chambal Region" IJRET: International Journal of Research in Engineering and Technology eISSN: 2319-7708 ISSN: 2321-7308
Authors: Mukesh Tiwari, Arun Kumar Shukla

Paper Title: An Implementation of FACE Recognition System (FARS) Using PCA and PSO Based Techniques

Abstract: Feature selection (FS) is a universal optimization problem in machine learning, which reduces the number of features, removes irrelevant, noisy and redundant data, and results in acceptable recognition accuracy. It is the most important step that affects the performance of a pattern recognition system. Feature selection aims to choose a small number of relevant features to achieve similar or even better classification performance than using all features. It has two main conflicting objectives of maximizing the classification performance and minimizing the number of features. However, most existing feature selection algorithms treat the task as a single objective problem. In this paper we present a novel feature selection system, FARS, based on combination of particle swarm optimization (PSO) and Principle Component Analysis (PCA). The proposed PSO and PCA based feature selection system is utilized to search the feature space for the optimal feature subset where features are carefully selected according to a well defined discrimination criterion. The classifier performance and the length of selected feature vector are considered for performance evaluation using MATLAB in ORL face database.

Keywords: Face Recognition, Feature selection, PSO, PCA, ORL Dataset

References: 

Authors: Áswhathy V.S, Sandeep Chandran

Paper Title: An Execution, Scrutiny and Collation on VANETs Routing Protocols

Abstract: VANETs are termed as Vehicular Ad-hoc Networks, which are considered as one of the recent advances coming under the minor group of Mobile Ad-hoc Networks (MANETs). VANETs form an extemporaneous formation of wireless networks for data exchange in the sphere of vehicles. Due to self-formulating and adaptive nature of VANETs, that causes a numberous challenges like mobility issues, connectivity problems, security and privacy, which emerge to degrade its performance. One of the main threats is the routing protocol. There are several VANETs routing protocols, this proposed paper stipulate an implementation, analysis and comparison based on AODV and OLSR routing protocols under a city environment. To simulate the VANET scenario, requires two types of simulators: mobility simulator and network simulator. Here VANET MobiSim for generating the mobility files and Ns3 for
checking the performance of routing protocols on the mobility files created by VANET MobiSim. The performance of both protocols can be analyzed and finally compared with the help of three criterions: packet-delivery-ratio, end-to-end delay and throughput. This paper arrives at a conclusion as AODV protocol is more effective than OLSR in inter-urban city scenarios.

**Keywords:** VANETs, V2V, MANETs, AODV, OLSR, VANET MobiSim, Ns3 Simulator.

**References:**

**Authors:** Rajkumar Jain, Narendra S. Chaudhari

**Paper Title:** On Constraint Clustering to Minimize the Sum of Radii

**Abstract:** We consider the min-cost k-cover problem: For a given a set P of n points in the plane, objective is to cover the n points by k disks, such that sum of the radii of the disks is minimized. In this paper we introduce the concept of constraints for min-cost k-cover problem. In any instance I of k-cover, the optimal solution value is at most the maximum radius r of ball B(v, r) centered at v ∈ V in I. It implies that, in optimal solutions there always exists a constraint that separates the optimal solution. Investigation formulate that a can-not link constraint always separate the optimal solution very clearly and reduces cardinality of distinct maximal disks. Introduction of constraints improves the performance of min-cost k-cover algorithm over the existing algorithms.

**Keywords:** k-clustering, min-cost k-cover, minimum sum of radii cover, constraint clustering.

**References:**