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1.	**Authors:** Okhaifoh, Joseph Ebosetale, Umayah, Erhiega N., Oko-oboh, Akhere Angus, Onyishi, Donatus Uchechukwu	
	Paper Title: Modelling and Simulation of Voice over Internet Protocol (VoIP)	

Abstract: Real time voice transmission is now widely used over the Internet and has become a very significant application. Voice quality is still however an open problem due to the loss of voice packets and the variation of end-to-end delay packet transmission. These two factors are a natural result of the simple 'best-effort service' provided by the current network. Indeed, the nowadays Internet provides with it a simple packet delivery service without any guarantee on bandwidth, delay or drop probability.

The focus in this paper is the simulation of two types of models; a M/M/1 queue and the M/G/1 queue, both using an input of ë, size of buffer, number of buffers, and the codec type. The output that was examined is the Quality of service parameters such as the End to End Delay, Packet Loss and Jitter. It was found that in order to control system behavior it's important to make sure that good tuning is used, as based on this paper's results; it can reduce the network congestion.

Keywords: Quality of Service, end-to-end delay packet transmission, bandwidth, drop probability

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2.	**Authors:** S.Sundari, Alamelu Nachiappan	
	Paper Title: Performance Evaluation of Stable and Unstable Biochemical Reactor Process	

Abstract: Bioreactor control has become an active area of research in recent years.This paper deals with the operation, mathematical modeling and IMC based design of a biochemical reactor. The dynamic behaviour was studied by changing the main operating parameters – dilution rate and its disturbance rejection for a step input change using autotuning of the controller is determined. We have found that the regimes strongly depend on the operating conditions. The bioreactor model was implemented in Matlab Simulink and the results of simulation for a stable and unstable processes are presented comparatively. Transient response characteristics for the processes are evaluated and discussed.

Keywords: Biochemical reactor, autotuning of PID controller, stable operating point, mathematical modelling, Transient response

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3.	**Authors:** FatemehPanahi, Mohammad Hassan Assareh, Mohammad Jafary, Mohsen MohseniSaravi, AlirezaGivar, HosseinArzani, Ali Tavili	
	Paper Title: Salsolaarbuscula Responses to Salt Stress	

Abstract: Salt stress is a world-wide problem and soil salinity is common in arid and semi-arid regions. This study was undertaken to investigate salt tolerance in Salsolaarbuscula in laboratory and natural conditions and recognize the mechanisms that allow it to tolerate these conditions. This study had two parts of greenhouse and natural habitats. The treatment solutions for salinity tests were different concentrations of NaCl and Na2SO4 (0, 100, 200, 300, 400, and 500 mM) with three replicates and growth parameters and proline and soluble sugar were determined in vegetative growth stage in greenhouse. Soil (two depths of 0-10 cm and 10-45 cm) and plant (root and shoot) samples have been harvested from three 200 meter transects in three provinces of Esfahan, Semnan and

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Markazi.Proline and soluble sugar andsoil texture and EC were measured in laboratory. Collected data were analyzed using a factorial experiment and means were compared by DMRT method by SPSS software. Results indicated that proline and soluble sugar were significantly affected by salinity levels and increased with salinity increase. The rate of growth parameters increased with an increase in salinity up to 400 mM while salinity levels more than 400 mMNaCl caused all growth characteristics decline. Data obtained from the laboratory experiment confirmed the findings noted during the field study. Results also indicated high salt excretion capability in S. arbusculawhich is possible by leaves fall. It has to be mentioned that nature isunpredictable and observing unexpected trends under specific conditions is not impossible.

Keywords: NaCl, Na2SO4, Salsola arbuscula, salt tolerance.

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4.	**Authors:**	**Mugdha Parande, Bhushan Hajare**	**19-22**
	Paper Title:	**Build a Web Application with Precautions to Prevent SQL Injection Attack**	

Abstract: This paper explain SQL Injection, one of the most commonly exploited vulnerabilities found in web applications and second, In this outline possible steps which we can take to ensure that our website is protected from SQL Injection attacks.

Keywords: SQLIA, SQL injection attack,Tutology,Blind SQL,Precaution.

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5.	**Authors:**	**Srudeep Somnaath T K**	**23-28**
	Paper Title:	**Autonomous Remote Control Car with Lane Detection and Collision Avoidance System**	

Abstract: According to the United States Census Bureau, there were 10.8 million motor vehicle accidents in the United States alone in the year 2009. Auto collisions are the leading cause of injury-related deaths, around 1.24 million each year, 25% of the total from all causes. It was reported that 35,900 fatalities occurred due to car related accidents. While some of these accidents are not fatal or critical, people who are involved are left with hefty financial expenses and a definite increase in their insurance policy. As per World Health Organization survey in 2000, the financial cost of these crashes was approximately 518 billion dollars. What if all of these auto accidents could be prevented or at least reduced to stop car related deaths and expenses? These statistics triggered a big concern and hence this system was conceived. This system detects the lane and avoids accidents in a significant manner, still very affordable by using cost effective modules. The paper proposes an intelligent collision avoidance system, and also a key algorithm for recognizing navigation and movement controlling. This in turn removes the factor of human error, when it comes to stopping a car in emergency situations. The proposed system will be a combination of software and hardware, both working in a cohesive manner.

Keywords: Autonomous car, remote control car, lane detection, collision avoidance system, ultrasonic sensor, infrared sensor, ARM 7 TDMI S LPC2129.

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6.	**Authors:**	**Anyaka Boniface Onyemaechi, Imaeka Charles I**	**29-35**
	Paper Title:	**Small Hydropower Projects for Rural Electrification in Nigeria: A Developer's Perspective**	

Abstract: Power generation in developing nations is a vital index for the socio-economic development of these countries. Renewable and sustainable options for electric power generation have become attractive to many nations. This paper addresses power generation for rural applications by means of small hydropower plants. A flowchart is developed for use by Power utilities and Independent Power Producers that are interested in small hydropower generation. Recommendations and possible cost reductions for small hydropower projects for interested developers are also highlighted.

Keywords: small hydro, renewable energy, rural electrification, project financing, flowchart

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Authors:	**S. S. Bargujer, N. M. Suri, R. M. Belokar**
Paper Title:	**Thermo Mechanical Processing Of Hypereutectoid Steel Wire Rod in Lead Patenting**

7.

Abstract: Lead patenting process is the most efficient way to transform hot rolled steel wire rod of different chemical composition into fine pearlitic steel. However, the optimization of various parameters of lead patenting process is critical to achieve high efficiency of transformation process in mass production of hypereutectoid steel wires. The experiment was conducted to find out the optimum range of austenitic temperature, lead bath temperature and phase transformation time. The effect of carbon percentage, size of steel wire rod and drawn strain prior-to-patenting on mechanical properties are also observed through various experiments and evaluated.

Keywords: Tensile strength; Torsion strength; Hypereutectoid steel; Lead patenting process.

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Authors:	**V. Joseph Peter, M.Karnan**
Paper Title:	**Medical Image Analysis Using Unsupervised and Supervised Classification Techniques**

8.

Abstract: The evolution of digital computers as well as the development of modern theories for learning and information processing leads to the emergence of Computational Intelligence (CI) engineering. Liver surgery remains a difficult challenge in which preoperative data analysis and strategy definition may play a significant role in the success of the procedure. Extraction of liver fibrosis is done using image enhancement techniques using various filtering techniques, unsupervised clustering techniques such as modified k means and fuzzy c means and supervised techniques such as ANN, BPN and feed forward NN. It constructs a statistical model of liver fibrosis from these MRI scans using ANN, SVM, GA with k means, GA with Fuzzy and Feed forward back propagation neural network classifier. Our experimental study analyzed 250 MRI images. These results are better than the existing image-based methods which can only discriminate between healthy and high grade fibrosis subjects. With appropriate extensions,

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our method may be used for non-invasive classification and progression monitoring of liver fibrosis in human patients instead of more invasive approaches, such as biopsy or contrast-enhanced imaging. The proposed system is tested on more than 300 digitized MRI Image database to establish its competence.

Keywords: Computational Intelligence, enhancement techniques, clustering techniques, fuzzy c means, back propagation neural network.

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Authors:	Rahul D.Gorle, Diwesh B.Meshram, Pratik L.Naik, Vivek S.Narnaware	
Paper Title:	Optimization of Effective Parmeter of Jatropha Biodiesel Using Taguchi Method and Performance Analysis Using CI Engine	

Abstract: Experiments are carried out by biodiesel blends and compared it's with diesel fuel characteristics. In this study, the optimization of experimental parameters, such as catalyst type, catalyst concentration, molar ratio of alcohol to oil and reaction temperature, on the transesterification for the production of Jatropha methyl ester was performed. Alkali catalyzed method has been used for biodiesel production process by using catalysts such as KOH, NaOH, NaOCH3. The Taguchi method helped to understand the effect of control parameter and to optimize the experimental conditions from a limited number of experiments and contribution of each noise factor calculated by ANOVA. Finally the yield of Jatropha methyl ester could be improved using control parameter which was obtained by Taguchi method. This paper investigated the performance and emission characteristics of various blends of Jatropha biodiesel with diesel on a Single cylinder four stroke diesel engine. The acquired data were analyzed for various parameters such as brake thermal efficiency (BTE), brake mean effective pressure (BMEP), brake specific fuel consumption (BSFC), exhaust gas temperature (EGT).The blends of BJ-10 and BJ-20have superior emission characteristics than other blends and closer to diesel value.

Keywords: ANOVA, Basic catalyst, Biodiesel, FAME Jatropha methyl ester, Taguchi method, Transesterification, Engine performance and emission.

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Authors:	**Amey Kelkar**	
Paper Title:	**Decoupling the World Wide Web**	

Abstract: In recent years, much research has been devoted to the investigation of object-oriented languages; contrarily, few have investigated the investigation of symmetric encryption. Given the current status of perfect modalities, scholars compellingly desire the investigation of redundancy that paved the way for the development of erasure coding. We motivate a compact tool for refining the Internet, which I call SplitSigner.

Keywords: symmetric encryption, redundancy

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Authors:	**Madhvi Jangalwa, Dushyant S. Sisodiya**	
Paper Title:	**Estimation and Analysis of PIC on DS - CDMA**	

Abstract: This paper deals with the design of sub-optimal detectors in an interference channel with fading and with Additive White Gaussian Noise (AWGN). Parallel interference detector (PIC) is one of the Multiuser Detection (MUD) techniques, where it employs canceling or suppressing interfering users from the desired signals. The conventional detectors typically either ignore the interference or treat other user interference (Multiple Access Interference) as merely noise. But Multiple Access Interference (MAI) has a structure which can be exploited in the detection process. This paper quantifies the significant performance gain if the detector exploits the MAI structure through Multiuser detection technique, which not only improves the capacity of the channel but also reduce requirement for power control. The simulation result shows the better Bit Error Rate (BER) performance of PIC detector over conventional detector.

Keywords: AWGN, PIC, MUD, MAI, BER.

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Authors:	Medisetty Nagendra Kumar, S. Srividya
Paper Title:	Genetic Algorithm based Color Image Steganogaphy using Integer Wavelet Transform and Optimal Pixel Adjustment Process

Abstract: Information security has become a cause of concern because of the electronic eavesdropping. For hiding secret information in images, there exist a large variety of steganographic techniques. Some of them are more complex than others and all of them have respective strong and weak points. Different applications have different requirements of the steganography technique used. For example, some applications may require absolute invisibility of the secret information, while others require a larger secret message to be hidden. In short, capacity, robustness and invisibility are three important parameters in information hiding and are quite difficult to achieve in a single algorithm. This paper proposes a novel steganography technique for digital colour image which aims at effective retrieval of hidden data in the colour image without significant degradation in the quality of the colour image. The professed methodology utilizes the least significant bits of the three colour channels (Red, Green, Blue) in a given colour image for embedding the secret message based on Integer Wavelet Transform, Genetic Algorithm and Optimal Pixel Adjustment Process (OPAP). The experimental results show that the proposed method is a secure steganographic method that effectively extracts the hidden message with good image quality and provides reasonable hiding capacity as compared to the adaptive methods of gray scale steganography systems.

Keywords: Genetic Algorithm, Histogram Modification, Integer Wavelet Transform, Optimal Pixel Adjustment Process, RGB channels, Steganography.

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Authors:	**M. L. Palash, Masum Billah, M. J. Rashid**	
Paper Title:	**Coverage Planning of Mobile WiMAX for Urban and Suburban Environment using Power Scheduling Scheme**	

Abstract: This work presents thecoverageplanning of Mobile WiMAXforthe urbanand suburban environment. An effective coverageplanningis veryimportant to obtain the benefits over existing voice and datacommunication techniques.In thisrespectwe proposeacosteffective coverageplanning basedonthepower frequency schedulingtechnique.This techniqueisflexibletocapacity anddata speedvariance.Theefficiency ofpower schedulingscheme isfound higher compare toother scheme.Thisproposed planning canbe implemented in the urban andsuburbanareas without changing thestandardhardware equipment of MobileWiMAX.

Keywords: IEEE802.16e,cover ageplanning,powerfrequency scheduling, Mobile WiMAX.

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Row 13 page range: **66-70**

Authors:	**Ati Swarna Sindhura, K.Sanath Kumar, Ravi Mathey**	
Paper Title:	**An Efficient and Reliable Data Delivery in Ad hoc Networks**	

Abstract: This particular papers addresses the scuffle of giving data packets with regards to highly active mobile random networks inside of a reliable and also timely fashion. Most recent random redirecting methodologies are at risk of node ability to move, especially with regards to large-scale methods. Driven by this challenge, we propose a capable Position-based Opportunistic Routing (POR) method which takes gain benefit stateless property of geographic routing together with broadcast attributes of instant medium. We recommend a position-based opportunistic direction-finding mechanism that's deployed with no complex creating to order to protocol and also achieve a lot of reception with no losing the advantage of collision avoidance given by 802. 11. The very notion of in-the-air back-up significantly enhances the robustness in the routing method and minimizes the latency and also duplicate forwarding because of local route repair.

Keywords: About four key words or phrases in alphabetical order, separated by commas.

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Row 14 page range: **71-76**

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	Authors:	Anu Rani Sam, P.Arul
	Paper Title:	Transient Stability Enhancement of Multi-machine Power System Using UPFC and SSSC

Abstract: Power systems are subjected to various types of disturbances which cause the problem of losing stability. The problem of transient stability is a crucial problem. Transient stability evaluation of large scale power systems is an extremely intricate and highly non-linear problem. The main causes of transient stability may be due to transmission system faults, sudden fault changes, loss of generating units and line switching. So the enhancement of transient stability is essential for a secure power system operation. Transient stability of a system refers to the stability when subjected to large disturbances such as faults and switching of lines. Transient stability of the system can be improved by increasing the system voltage, increasing the X/R ratio, increasing the number of parallel lines between points and placement of the FACTS devices. The FACTS controller can improve the voltage stability, steady-state and transient stability of a power system.UPFC (Unified Power Flow Controller) and SSSC (Static Synchronous Series Compensator) can improve the transient stability of the system. Simulation of transient stability without and with FACTS device was done using MATLAB based program and the analysis is performed on IEEE 6 bus system.

Keywords: FACTS, Newton-Raphson method, (SSSC) Static Synchronous Compensator, Transient Stability, Unified Power Flow Controller (UPFC)

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	Authors:	Mayur Sawant, Kishor Kinage, Pooja Pilankar, Nikhil Chaudhari
	Paper Title:	Database Partitioning: A Review Paper

Abstract: Data management is much tedious task in growing data environment. Partitioning is the best possible solution which is partially accepted. Partitioning provides availability, maintenance and improvised query performance to the database users. This paper focuses the three key methods of partitioning and helps to reduce the delay in response time. Paper also investigates the composite partition strategies which includes the date, range and hash partitions. The paper shows the encouraging result with partitioning methods and basic composite partition strategies.

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Keywords: Database partitioning, Dbms_Redefinition, Range Partitioning, Hash Partitioning, List Partitioning

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Authors:	**Rajkumar, Vishwanath. B. Patil**	
Paper Title:	**Analysis of Self-Supporting Chimney**	

17.

Abstract: Chimneys are tall structures and the major loads acting on these are self weight of the structure, wind load, live load due to lining, earthquake load & temperature loads. In this paper a RC chimneys will be designed considering dead load, wind load and earthquake load. The Bureau of Indian Standards (BIS) design codes procedures will be used for the design of chimney. The present paper discusses the parametric study of RC chimney which is made by obtaining the results from software for different heights, diameter, earthquake zones, wind zones, type of soils and various load conditions because of changes in the dimensions of chimney, structural analysis such as response to earthquake and wind oscillations have become more critical to influence on the response and design of chimney. Parametric study on chimney from height 150 meters to 250 meters at an interval of 5 meters, for Zone II, Hard soil & Critical Zone of Zone V, Soft soil with wind speed varying from 33 meters/sec to 55 meters/sec with an internal temperature of 100 Degrees. The response of the chimney is studied & recorded in Tables & Graphs. The analysis is carried out using programming software Microsoft Visual Basic 6.0. The results obtained from the above cases are compared. Finally, the maximum values obtained in wind analysis and seismic analyses are then compared for deciding the design value.

85-91

Keywords: RC Chimney, along & across wind analysis, Seismic analysis, Visual Basic.

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Authors:	**Ashish H. Makwana, Jayeshkumar Pitroda**	
Paper Title:	**An Approach for Ready Mixed Concrete Selection For Construction Companies through Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) Technique**	

18.

Abstract: Ready Mix Concrete (RMC) industry is continuously growing all over the world and India is not an exception to it. The pace of mechanization in the past was very slow due to the availability of cheap and abundant labor, lack of capital investment and the highly fragmented nature of the construction sector. Multi-criteria decision making for evaluation of Ready Mixed Concreteby implementing Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) method is simple to understand and permits the pursuit of best alternative criterion depicted in a simple mathematical calculation. Due to this, decision making for selection of suitable Ready Mixed Concrete is of special importance. The Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) was first developed by Yoon and Hwang. For a Ready Mixed Concrete selection different important criteria are takeninto account. These criteria have different weights by different experts. Using these weights provides the rank to every Ready Mixed Concrete with the help of a Technique for Order Preference by Similarity to Ideal Solution (TOPSIS).

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Keywords: Ready Mixed Concrete, Mechanization,Multi criteria decision making, Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) method, decision making.

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19.

| **Authors:** | **Auf Abdul-Rahmaan Hasso** |
| **Paper Title:** | **Electrocardiogram (ECG) Signal Diagnosis Based on Component Extraction** |

Abstract: This work presents a diagnosis system of ECG signal based on its component extraction. The ECG signal was analyzed in time & frequency domain techniques. In time domain techniques, the signal is segmented to extract all the medically important features that were used in the diagnosis. A bottom-up derivative-based algorithm was adopted. This Algorithm subjects the signal derivative to some empirical thresholds. The result of this method is a segment locating waveform that separates and delimits the various segments of the ECG.

In frequency domain techniques, the signal is transformed by Fast Fourier Transformation. The signal is transformed sometimes beat by beat. The signal is analyzed in frequency domain by study the power spectrum and find thresholds for normal cases then compare these thresholds with other ECG signals to recognize the abnormal cases. Each disease has its own power spectrum which is different from the normal cases by a threshold in a specify location in the spectrum. Different medical criteria of diseases categories were used in making the diagnostic decision. They were taken from medical books. The system was tried on a large number of ECG signals, some samples of results were given as diagnostic reports.

Keywords: ECG, Time Domain, FFT, Diagnosis.

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20.

| **Authors:** | **Pavithra .J, Arnika Tripathi** |
| **Paper Title:** | **Correlated Low Rate DDoS Attack on Router Queues** |

Abstract: Network security is the booming issue inspite of tremendous advancements in the security aspects. Among the available network issues, attacks performed to breach the security against a particular host is also a major concern. In regard to this we preferred to study and perform DDoS attack in a coordinated manner that utilizes Botnet technology which attempts to show that it becomes difficult to identify the attacker by using this method. As a result by this it becomes a challenge to the existing attacker to invent an even more devasticated attack type to perform attack. In this method we propose to perform UDP-type attack. The introduced correlated DDoS attacks are more powerful than simple DDoS attacks which involves the combined effort of several machines in attacking a target system, in which an attacker generates highly correlated attack bursts from different sources towards a target router. The main idea behind it is to exploit the correlation among multiple groups of zombies scattered across different locations and have them aggregated to generate attack burst traffic at the target router. For this we use packet level simulations that demonstrate the UDP attack in a simulator test bed.

Keywords: DoS, DDoS, correlated DDoS, UDP

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21.

| **Authors:** | **Arifuzzaman, Md. Mostafizur Rahman, Farhana Akhter** |
| **Paper Title:** | **Treatment of Leachate of Savar Solid Waste Landfill Site** |

Abstract: Landfill leachate is complex waste water with considerable variation in both quality and quantity. The composition and concentration of pollutants are influenced by the types of waste deposited, hydro geological factors and more significant by the age of the landfill site. In general, leachate is highly contaminated with organic contaminants measured as chemical oxygen demand (COD), biochemical oxygen demand (BOD) and also with high

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ammonium nitrogen concentration. Aerobic biological processes have been found the most effective and reliable treatment option of landfill leachate for developing country like Bangladesh. Leachate containing high concentrations of organic and nitrogen compounds results serious environmental problems near the landfill site.

This research was undertaken to investigate the performance of both chemical treatment by alum coagulation and biological process that is extended–aeration activated sludge process without sludge return and anaerobic treatment of Savar Landfill leachate containing high organic and nitrogen concentrations. The main part of the study was studied on the removal efficiency of BOD, COD and ammonia in each method and heavy metals removal were also studied in coagulation and flocculation method. It is observed that in extended aeration process BOD removal is around 80% at 6 days detention time and 94% at 15 days detention time. In the same treatment method experiment results reveal that 75% of ammonia removal is achieved in 6 days aeration period mainly due to air stripping process and in total 98% removal is achieved in 15 days aeration period. The optimum pH of alum coagulant for leachate treatment was 6.5. Also an effective dosage of alum is 1.4 g/L for the best efficiency of heavy metals and COD removal. The maximum amount of COD and heavy metals that could be removed by the alum was about 21 and 77-91% of the initial value, respectively.

It is also found that anaerobic biological treatment alone cannot efficiently remove the COD content of leachate from the site. BOD/COD ratio was varies from 0.19 to 0.14 in anaerobic batch system for 20 and 41 days, respectively. This BOD/COD ratio means low biodegradability of treated leachate. Chlorine oxidation, coagulation with high alum dose and extended aeration also conducted after construction of treatment facility by Dhaka City Corporation at Savar landfill site. Only 20 to 41 % COD removed in chlorine oxidation and alum coagulation. The second extended aeration results show that the dilution is not essential to treat leachate. It was taken a few days initially to convert the facultative microorganisms into aerobic microorganisms.

Keywords: Landfill leachate, COD, heavy metals, microorganisms.

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Authors:	**A L Sriram, Subramanian, Swarna Sweety**	
Paper Title:	**Extracting Vivadi Ragas and Avivadi Ragas Using BFS Algorithm**	

Abstract: Sampoorna ragas are the backbone of the Indian classical music. The sampoorna ragas in south Indian classical music can be divided into vivadi and avivadi ragas. The vivadi ragas are the one which produce discordant effect and hinder the free flow. The proposed identifying the vivadi and avivadi ragas through BSF can help in retrieving all the janya ragas and implementing the same in automated accompanying system.

22.

Keywords: Vivadi ragas, Sampoorna ragas, Avivadi ragas, BFS algorithm.

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Authors:	**Vagolu Aruna, P.Deepthi**	
Paper Title:	**High Performance Low power Dynamic Multiplier**	

23.

Abstract: The DPST has been applied on both the modified Booth decoder and the compression tree of multipliers to enlarge the power reduction. This paper provides the experience of applying an advanced version of our former dynamic power suppression technique (DPST) on multipliers for high-speed and low-power purposes. To filter out the use-less switching power, there are two approaches, i.e., using registers and using AND gates, to assert the data signals of multipliers after the data transition. The simulation results show that the DPST implementation with AND gates owns an extremely high flexibility on adjusting the data asserting time which not only facilitates the robustness of DPST but also leads to a 40% speed improvement. Adopting a Xilinx Spartan 3 Xc3s200 board the proposed DPST-equipped multiplier dissipates only 0.0121 mW per MHz in H.264 texture coding applications, and obtains a

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40% power reduction and the overall utilization of the resources reduced to 26%.

Keywords: (DPST), AND, H.264.

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Authors:	Abdolhamid Sohrabi, AzimRezaei Motlagh, Habib Rostami, Ayat Akbari

Paper Title:	High Performance Current-Mode Multiplier Circuit

Abstract: Multiplier-divider circuits is using in digital signal processing base on neural networks and communications (amplifiers with variable gain, modulators, detectors and,…).In Most of CMOS analog circuit, transistors are only in triode or saturate regions; till now both regions not used. In this one kind of current mode multrlier-divider circuits is intrudused.it is very simple, has low die area and wide range in low voltage . all tough this circuit has no sense to temperature variation and varying parameters.

A CMOS current-mode analog multiplier/divider circuit is presented. It is suited to standard CMOS fabrication and can be successfully employed in a wide range of analog signal processing applications The circuit power consumptions is 75 µW respectively, while its frequency bandwidths is 59.7 MHz.

Keywords: Analog signal processing, current-mode operation, multiplier, reconfigurable circuits.

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Authors:	**Shivani Jain, A.L.N. Rao**	
Paper Title:	**A Comparative Performance Analysis of Approximate String Matching**	

Abstract: This paper presents a comparative study to evaluate experimental results for approximate string matching algorithms on the basis of edit distance. We compare the algorithms in terms of the number of character comparisons and the running time for molecular data, binary alphabets English alphabets etc.

The terms like word processors, web search engine, molecular sequence, DNA sequence analysis and natural language processing have lead to the development of many algorithms in the field of pattern matching in a string. Amongst the various string searching algorithms being used, here the focus is mainly approximate implementation of pattern matching algorithms such as Knuth-Morris-Pratt, Boyer-Moore, Raita, Horspool based on PHP. The comparison between these algorithms is done with the help of Levenshtein distance.

It also describes the importance of design of efficient "Approximate Pattern Search Algorithms in molecular database, binary alphabets, English alphabets and so on". This approach is advantageous from all other string-pattern matching algorithms in terms of time complexity. Therefore this procedure improves the efficiency of approximate string matching and gives the near-optimal results.

25.

Keywords: Pattern Matching, Edit Distance, Approximate String Searching, Levenshtein Distance   **123-128**

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Authors:	**Rohit Rakheja, Bharat Bhushan, R.K. Gupta**	
Paper Title:	**Analysing the Risk Issues in Supply Chain Management by Using AHP Methodology**	

Abstract: In this paper we have a research work for analysing the supply chain management risk issues that occur in the industries. The application of AHP here can be used as a one of the best possibilities that can be used to evaluate the mentioned circumstances. As in this increasing competitive market, the decision making places an important role as the results depends upon the direction of concrete decisions taken. This paper represents Analytical Hierarchy Process as a multi and effective decision making methodology that if can be used in effective manner could prove to be very much useful.

26.

Keywords: Supply Chain, Analytical Hierarchy Process, Supply Chain Risks, Supply Chain Risk Management, Decision Making   **129-131**

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Authors:	**Richa Verma**	
Paper Title:	**A Survey on Wireless Sensor Network Applications, Design Influencing Factors & Types of Sensor Network**	

27.

Abstract: Modern advancement in wireless communications and electronics has facilitated the development of low-cost sensor networks. These sensor networks can be used for various application areas (e.g., health, military, home). For different application areas, there are various technical issues that researchers are presently resolving. Wireless sensor networks are interesting to researchers due to their broad range of application in areas such as target detection and tracking, environmental monitoring, industrial process monitoring, and tactical systems. A wireless sensor network (WSN) has significant applications such as remote environmental monitoring and target tracking. These sensors are prepared with wireless interfaces with which they can communicate with one another to form a network. WSN term can be usually sensed as devices range from laptops, PDAs or mobile phones to very tiny sensing devices. In this paper we give an overview of several new applications, factors influencing sensor network design and about different network topologies.

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Keywords: Wireless sensor network, Sensor network services, Applications, factors, Ad hoc networks

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28.	**Authors:** Patel Ankit Mahendra, Jayeshkumar R. Pitroda, J. J. Bhavsar	
	Paper Title: A Study of Risk Management Techniques for Construction Projects in Developing Countries	

Abstract: Risks have significant impact on construction projects in terms of its primary objectives. Construction projects which are intricate in nature, uncertainty and risks in the same can develop from different sources. The record of the construction industry is not acceptable in terms of coping up with risks in projects. Risk management is a process which consists of identification of risks, assessment with qualitatively and quantitatively, response with a suitable method for handling risks, and then control the risks by monitoring.This study proposes to apply the risk management technique which includes well - documented procedures for the one stop solution all types of hazards most likely to occur during any construction project Lifecycle.

Keywords: Risk Management, Construction Projects, Risk

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29.	**Authors:** Samadhan D. Shelke, Pankaj P. Bhangale	
	Paper Title: Information Technology Training for Construction Industry	

Abstract: Despite the construction industry's generally positive reaction to the use of information and communication technologies (ICTs) in many of its functions, some of the profession's key players reside in a digital divide and do not benefit from advances in technology. The construction workers, an at-risk population with high rates of workplace accidents, are affected by that divide because they rarely take advantage of available ICTs at work. One application of ICTs that can help construction workers is computer-based training (CBT) for occupational safety. However, the design of CBT materials for Indian languages-speaking workers needs to go beyond basic localization of existing products in English. A radical localization approach that uses participatory design sessions with construction workers and their supervisors. The construction workers reacted positively and retained knowledge from CBT materials, including videos with elements of humor and without graphic representations of accidents, modeled after the genre of a television situation comedy.

Keywords: ICTs, IT, CBT, NetsCape, Website, Internet, Usenet.

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30.	**Authors:** Animesh Tiwari, Megha Jain	
	Paper Title: Analysis of Supply Chain Management in Cloud Computing	

Abstract: Supply chain management typically involves supervising the transfer of products and goods, such as from a supplier, then to a manufacturer, a wholesaler, a retailer and finally to the consumer. Information technology (IT) refers to the use of computer-based programs to store and manipulate information. IT advances directly can correlate to supply chain management improvements, such as through the rise of effective virtual supply chains. Supply chain information collaboration system bases on cloud computing technology provide efficient supply chain information system based on cloud computing technologies like software as a service (SaaS), platform as service

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(PaaS) and infrastructure as service (IaaS). With the availability to anytime and anywhere cloud services provide sharing of resources of its services to supply chain. Because supply chain information sharing are demand driven by nature and increase or decrease globally so it should need scalable distributed system rather than centralize one. This paper adopts basic idea of cloud computing to provide an efficient and scalable solution for supply chain management using distributed datacenter of cloud computing.

Keywords: Cloud Computing, Distributed Cloud, Distributed Datacenter, Supply Chain Management

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Authors:	**Majid Fereidoon, Gholamreza Khorasani**	
Paper Title:	**Water Quality Simulation in Qarresu River and the Role of Wastewater Treatment Plants in Reducing the Contaminants Concentrations**	

Abstract: This paper presents a water quality simulation model considering the some main sources of pollution for Qarresu River near Kermanshah city in Iran . The pollutants such as biochemical oxygen demand (BOD), Total Nitrogen (TN) and Total Phosphorous (TP) descend from some industrial units. QUAL2K software is employed for simulation and estimation of pollution loads during a year. The comparison and assessment of pollutants density shows the best location of any wastewater treatment plant considering the economic and environmental condition.

Keywords: BOD, TN, TP, Qarresu River, QUAL2K.

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Authors:	**G. Saravanakumar, L. Ravikumar, H. P. Jagadish**	
Paper Title:	**Effect of Temperature on the Performance of Squeeze Film Damper Lubricated With Magnetorheological Fluid**	

Abstract: Modern machines demands high speed of rotation and thus requires provision of damping externally to the rotor system to reduce large force small amplitude vibrations. Magnetorheological fluid squeeze film dampers are new kind of dampers used in such applications. The viscosity of these fluids can be readily varied by changing the

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magnetic field intensity to reduce the vibrations. Magnetorheological fluids squeeze film dampers usually provide variable stiffness and damping at a particular excitation frequency by varying the coil current. This paper examines the performance of such dampers under the influence of temperature which changes due to the coil current flowing through the magnet, wide operating range of the rotor system. The analysis is conducted for every 10oC change in the temperature as mentioned in the earlier work and viscosity change and its effect on the performance of the damper is evaluated theoretically. The stiffness and damping characteristics decrease with increase in temperature. The results are plotted and it provides information on the effect of temperature effect on the performance of Magnetorheological fluid squeeze film dampers.

Keywords: Squeeze film damper, Temperature change, Stiffness and dynamic characteristics, Magnetorheological fluid, Speed.

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Authors:	**Anindya Sundar Das, Aditya Kumar Singh**	
Paper Title:	**10 GBPS Full Duplex Transmission Using Reed- Solomon Encoder and Decoder**	

Abstract: We have proposed and demonstrated a novel architecture for a bidirectional wavelength division multiplexed passive optical network (WDM-PON) system based on forward channel coding (FEC) method by employing Reed-Solomon (RS) encoder and decoder in the configuration. We have used mutually injection locking technique by employing Fabry-Perot laser diode (FPLD) as the broadband light source (BLS). The remodulation technique has been used for the uplink transmission by deploying reflective semiconductor optical amplifier (RSOA) at the user end. The RS codec has enhanced the performance of the system as it can transmit 10 Gbps data rate in the downlink and the uplink as well. Among many types of RS codes we have preferred the RS (255, 223) for its effectiveness and the capacity of burst error correcting. The uplink and downlink transmission performances are checked by the impressive eye diagrams and the low bit error rate (BER), measured at BER tester or eye diagram analyzer. The results provide its utility as an effective and suitable WDM-PON system for next generation broadband communication.

Keywords: WDM-PON, RS encoder and decoder, FPLD, RSOA

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Paper Title: **Evaluation of Road Safety Performance Based On Analytic Hierarchy Process**

Abstract: This article present the evaluation of SPIs (safety parameter indicator) affecting on road safety with using the MCDM method. Multi criteria decision making is one the method that used in decision management with more than one criteria to prioritize the factors. MCDM has types of technique to prioritize the factors but one of this technique is AHP (Analytic Hierarchy Process) used in this article. Statistical data in this article are taken from 21 European countries. All data classified in 11 safety performance indicators and used in AHP method. All 21 countries will be ranked with AHP based on these data and after ranking we can analysis that wich country has better policy and appropriate safety plane to enhance the quality of safety and transportation.

Keywords: Analytic Hierarchy Process, AHP, MCDM, Road Safety Indicators, Safety Management.

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Paper Title: **Application of Multi Criteria Decision Making Tools in Road Safety Performance Indicators and Determine Appropriate Method with Average Concept**

Abstract: This article presents the implementation of Multi Criteria Decision Making to evaluation of road safety performance in 21 European countries. These countries will be prioritizing based on 11 safety indicator. Simple Additive Weight method will used to evaluate 21 countries to determine which country has a best safety performance to reduce the fatality and accidents and which factors has more effect on performance measures. At last three methods of MCDM such as SAW, AHP and FUZZY TOPSIS will be compared to determine with method is sufficient for ranking of these countries based on safety factors and the result is closer to reality.

Keywords: Multi Criteria Decision Making, SAW, AHP, FUZZY TOPSIS, Road Safety Indicators.

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