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1.

Authors: Gurdeepinder Singh, Rajni Bala

Paper Title: Automatic Generation & Voltage Control of Interconnected Thermal Power System Including Load Scheduling Strategy

Abstract: This paper deals with the automatic generation control (AGC) of three area interconnected thermal power systems with combination of the automatic voltage control using automatic voltage regulator (AVR). The interconnected thermal unit is considered with three area concept. The primary object of the AGC is to balance the total system generation against system load and losses, so that the desired frequency and power interchange with neighboring systems are maintained in order to minimize the transient deviations and to provide zero steady state error in appropriate short time. Further the role of automatic voltage regulator is to maintain the terminal voltage of synchronous generator in order to maintain the bus bar voltage. Otherwise bus bar voltage goes beyond permitted limit. The interaction between active and reactive power demand is also analyzed in this paper. In this paper Load scheduling strategy is also considered in combination with AGC and AVR, in which utility takes steps to control the peak demand of plant by shifting peak load of different consumers towards valley with the aim of system stability, minimize the generation cost, postpone/ delay construction of new plant. Literature survey also shows, almost no attempt is made to combine the AGC with load scheduling strategy.

Keywords: Automatic Generation Control (AGC), Automatic Voltage Control (AVR), Area Control Error (ACE), Load Scheduling Strategy (LSS).

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2.

Authors: Anubhuti Khare, Manish Saxena, Rajesh Kourav

Paper Title: Analysis of the Character statics of Video Streaming on WLAN Networks

Abstract: The bursty nature of video streaming applications is due to the frame-based structure of video and this has an important impact on the resource requirements of the WLAN, affecting its ability to provide Quality of Service (QoS) particularly under heavily loaded conditions. In this paper, we analyse the unique delay characteristic of video streaming applications in a WLAN environment. We show that the "burstiness" of video is due to the frame-based nature of encoded video. We show how each video frame is transmitted as a burst of packets that is queued at the Access Point causing the delay to exhibit a sawtooth-like characteristic over time that is related to the frame rate and frame structure of the encoded video. In this paper, not only do we consider the end-to- end delay, but more importantly we consider the total delay required to transmit the entire video frame. We present experimental results for VBR and CBR video streams and calculate the upper bounds on video encoding parameters for streaming real-time interactive video over a WLAN.

Keywords: WLAN, Videostreaming, Connectivity

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3.

Authors: **Anubhuti Khare, Manish Saxena, Rajesh Kourav**

Paper Title: **Subatomic particle Sensitivity of Gigabyte Networks**

Abstract: We have presenting subatomic particle radiation testing of the 57710 network controller. It shows that there is a SEFI mode that could cause the internal network to become unavailable every two to 1136 years with the TCP/IP protocol and every five to 2276 years using the UDP protocol based on location and solar activity. To use intersystem networks, devices will need network controllers and switches. These devices are likely to be affected by single-event effects, which could affect data communication. In this paper, we will present radiation data and performance analysis for using a Broadcom network controller in a neutron environment.

Keywords: Networking, WLAN, Security

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4.

Authors: **Anubhuti Khare, Manish Saxena , Arun Kumar Mishra**

Paper Title: **String Model Resonator High Accuracy Measurement For F B G Sensors**

Abstract: Fibre Bragg grating (FBG) sensors are widely accepted as strain and vibration monitoring devices for advanced composite mechanical structures.This paper describes a string resonator that is used for the interrogation system of a Fiber Bragg Grating (FBG) strain sensor. For several years now, civil engineers have been collaborating with researchers in the field of optoelectronics, in efforts to develop fiber optic sensing and monitoring systems for civil engineering structures. Optoelectronics are the core of the telecommunications industry and are an important part of sensing in the aerospace industry. In the last ten to twenty years, optoelectronic technology has emerged in the fields of civil engineering, manufacturing and biomedicine, etc., in products such as fiber optic sensors.The strain on the fiber piece is calculated from the measured frequency based on that the natural frequency of a string is a function of the applied absolute strain. Existing research considered a fiber as a string, but a fiber is not a string in the strict sense due to its bending stiffness, thus the fiber should be modeled as a beam accompanied with an axial force. In the vibration modeling, the relationship between the strain and the natural frequency is derived, and then the resonance condition is described in terms of both the phase and the mode shape for sustaining resonant motion. Several experiments verify the effectiveness of the proposed model of the fiber.

Keywords: Smart structure, resonator fiber Bragg grating sensor, Tunable Optical Filter, beam model, Demodulation technique, string model.

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5.

Authors: **Tripti Sharma, Khomlal Sinha**

Paper Title: **Intrusion Detection Systems Technology**

Abstract: Network security is one of the most important nonfunctional requirements in a system [1]. Over the years, many software solutions have been developed to enhance network security and this paper provides an insight into one such solution which has become prominent in the last decade i.e. Intrusion Detection System (IDS) [2]. In this paper, we have proposed an overview of intrusion detection system and their classification with advantages and disadvantages, and also providing the basic requirement of intrusion detection system.

Keywords: Host based IDS, Intrusion Detection System, misuse IDS, network security, texanomy, etc

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6.

Authors: **Latika Pinjarkar, Kamal Mehta**

Paper Title: **A Report on Differential Delay Analysis for Bus Codec**

Abstract: Design of portable consumer electronic devices such as mobile phones, video game and other embedded systems are increasingly demanding low power consumption to maximize the battery life, reduce weight and increase reliability. These types of power sensitive devices are equipped with microprocessors as the processing elements and memories as the storage units. With current complementary metal oxide semiconductor technology a large portion of power consumption is consumed as dynamic power. Bus encoding techniques for low power consumption have been studied in the last couple of decades. Which includes Frequent Value Encoding method, Bus Invert Coding method and Gray Encoding Method .But these techniques could not become the part of Computer architecture because data profile based analysis was not done and delay based analysis was not done. So these techniques are not compatible to incorporate in the computer architecture. The contribution of our work is to design a methodology for optimizing CMOS circuits to incorporate the bus codec techniques by doing the delay based analysis.

Keywords: Bus encoding, Differential Delay, Glitches, Inertial Delay

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7.

Authors: **R. Karmakar, A.Biswas, S.Mukherjee, A.Deyasi**

Paper Title: **Calculating Transmission Coefficient of Double Quantum Well Triple Barrier Structure having Parabolic Geometry using Propagation Matrix Method**

Abstract: Transmission probability of a parabolic double quantum well triple barrier structure in presence of finite thick contact barriers is computed using propagation matrix method for GaAs/AlxGa1-xAs material composition. This provides the idea of tunneling at energies less than barrier potential. Effect of different barrier thicknesses and well widths are independently studied on transmission coefficient, and also for a specified structure, material composition of barriers is varied to observe the tunneling effect. Propagation matrix method is used for simulation purpose, and computation is performed considering effective mass mismatch at junctions following BenDaniel Duke boundary conditions. Conduction band discontinuity is also incorporated in the analysis by virtue of that consideration. Contact and middle barrier widths are varied for the same composition for different applications.

Keywords: Effective Mass Mismatch, Parabolic Quantum Well, Propagation Matrix, Transmission Coefficient

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8.

Authors:	**P. Satish Kumar, Ch. Lokeshwar Reddy, V. Ramu**
Paper Title:	**Space Vector PWM Algorithm for Diode Clamped Multi-level Inverters using Fractal Structure**

Abstract: In this paper a space vector pulse width modulation algorithm for diode clamped multilevel inverter fed induction motor using the fractal structure has been proposed and applied for three-level and five-level inverters. In this method, fractal structure is used to represent the space vector of multilevel inverters. The switching sequence is determined without using look up tables, so the memory of the controller can be saved. The 1switching times of voltage vectors are calculated at the same manner as two-level SVPWM. It is easy to implement the triangularisation algorithm, which is used to locate the tip of the reference voltage vector. Thus, the proposed method reduces the execution time and complexity of multi-level SVPWM. This method can be extended to n-level inverter also. Based on above method, the simulation is carried out for three-level and five-level inverter fed induction motor and results are presented and analyzed. The obtained total harmonic distortions for three-level and five-level inverters are 5.70% and 3.61% respectively.

Keywords: Fractal structure, Induction motor, Multi-level inverters, Modulation index, SVPWM, THD.

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9.

Authors: **Anubhuti Khare, Manish Saxena, Rishabh Dubey**

Paper Title: **MIMO-OFDM Wireless Systems: Basics, Perspectives, And Challenges**

Abstract: Multiple-input multiple-output (MIMO) wireless technology in combination with orthogonal frequency division multiplexing (MIMOOFDM) is an attractive air-interface solution for next-generation wireless local area networks (WLANs), wireless metropolitan area networks (WMANs), and fourth-generation mobile cellular wireless systems. This article provides an overview of the basics of MIMO-OFDM technology and focuses on space-frequency signalling, receiver design, multiuser systems, and hardware implementation aspects. We conclude with a discussion of relevant open areas for further research.

Keywords: MIMO , MIMOOFDM.

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10.

Authors: **K. Satyanarayana, J. Amarnath, A. Kailasa Rao**

Paper Title: **Hybrid PWM Algorithm Based Vector Controlled Induction Motor Drive to Achieve Superior Waveform Quality**

Abstract: This paper presents a Hybrid PWM Algorithm Based Vector Controlled Induction Motor Drive to Achieve Superior Waveform Quality. The proposed algorithm uses six basic bus-clamping PWM (BBCPWM) sequences along with the conventional SVPWM (CSVPWM) sequence and these switching sequences have been developed by using the concept of imaginary switching times without using the angle and sector information. The proposed Hybrid PWM(HPWM) algorithm selects a suitable PWM sequence which results in lowest rms current ripple over a given sampling time interval. To validate the proposed HPWM algorithm, numerical simulation studies have been carried out and the results have been presented and compared.

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Keywords: CSVPWM, BBCPWM, HPWM, Induction motor, vector control.

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11.

Authors:	**Anubhuti Khare, Manish Saxena, Vijendra Singh Mandloi**
Paper Title:	**Performance Analysis of V-Blast Based MIMO-OFDM System with Various Detection Techniques**

Abstract: This paper presents the performance analysis of V-BLAST based multiple input multiple output orthogonal frequency division multiplexing (MIMO-OFDM) system with respect to bit error rate per signal to noise ratio (BER/SNR) for various detection techniques viz zero forcing (ZF), minimum mean square error (MMSE) and maximum likelihood (ML). A 2X2 MIMO-OFDM system is used for the performance evaluation. The simulation results shows that the performance of V-BLAST based detection techniques is much better than the conventional methods.

Keywords: Vertical Bell Labs Layered Space-Time (V-BLAST); multiple input multiple output (MIMO); orthogonal frequency division multiplexing (OFDM); bit error rate (BER); signal to noise ratio (SNR).

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Authors:	**Anubhuti Khare, Manish Saxena, Heena A Jain**
Paper Title:	**AMBTC-Compressed Image Using Genetic Algorithm**

Abstract: In this paper, we present an image-hiding scheme based on genetic algorithm. The secret messages are embedded into a compressed image of AMBTC. Genetic algorithm is enveloped to find the best substitution of AMBTC bitmap. The proposed scheme provides high visual quality of the stego-image. The enhanced system of the proposed scheme increases embedding capacity while retaining good quality of the stego-image. Experimental results show that the proposed scheme outperform the comparative schemes.

Keywords: AMBTC, Genetic Algorithm

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Authors: **Abha Tamrakar, Vinti Nanda**

Paper Title: **Compression of Watermarked Relational Database for Security and Optimization of Storage Consumption**

Abstract: Today's competitive world demands speed. If we are slow then we will be a loser. Providing security speedily is the aim of this paper. Relational database are very important for satisfying today's informational needs. More crucial phase is preventing its ownership rights. In earlier existing system security was provided by sending the encrypted relational database to the client system without compressing its size hence doesn't increases the speed of transfer rate. To overcome this limitation we are using compression technique which will provide security as well increases the speed of data transfer between clients to server system.

Keywords: Compression, ownership rights, Speed, watermarked relational data.

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Authors: **Tripti Sharma, Bhupesh Kumar Dewangan**

Paper Title: **Next Generation: Par of Cloud and Grid**

Abstract: In this paper we are showing the par of cloud and grid by comparing different fields. The main aim of this paper is to show the differences in terms of security, performance and resources used by both technologies. A Cloud computing technique is a cost-efficient computing approach in which the records or information and applications can be accessed from a Web browser by customers. A Computational Grid is a collection of heterogeneous computers and resources spread across multiple administrative domains with the intend of providing users easy access to these resources .This paper helps Grid and Cloud system users and administrators to have a clear difference between Grid and Cloud computing according to security, performance and resources.

Keywords: cloud computing, grid computing, security, performance, Resources.

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15.

Authors: **Swati Devabhaktuni, S.V.Jayaram Kumar**

Paper Title: **Performance Analysis of Self-Excited Induction Generator Driven At Variable Wind Speeds**

Abstract: This paper discusses steady state analysis and performance characteristics of a three-phase induction generator self excite with capacitor per phase. It is shown that for this mode of operation, there are certain ranges

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over which the values of the terminal capacitor, C, machine speed and load impedance have to be kept in order to maintain self excitation. In general, the performance characteristics are strongly influenced by the value of C and guidelines are suggested for selecting its proper value. This paper also presents the theoretical and experimental results of self excited induction generator under varying rotor speed operation of research. Three phase 3.7kW induction machine excited with symmetrical capacitor bank and loaded with symmetrical three phase resistive load, was the subject of investigation. Experimentally obtained results have been compared with calculated performance curves and very good agreement between them has been achieved.

Keywords: wind turbine, self-excited induction generator, steady state analysis, performance characteristics

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Authors:	**Jitender Sharma, Amit Kumar Garg**
Paper Title:	**Analysis of Tahoe: A TCP Variant**

Abstract: Internet has emerged as the basic need of the time. Internet has influenced every part of our life. Shopping, communication, entertainment, business, information, education all aspects of one's life are available on internet There has been a tremendous increase, almost an exponential rise, in the number of internet users in the recent times, which resulted in the form of congestion problem over the wide area network (WAN). Window size is an important parameter to avoid congestion. The basic idea of this work is to simulate TCP Tahoe using NS2 at different delay times and window size, to find which is best suited window size for this variant, depending on the parameters like bandwidth and delay time.

Keywords: RTT, AIMD, TCIP/IP, FAST TCP, TCP RENO, TCP TAHOE, TCP VEGAS, CWND.

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17.

Authors:	**A.Akbar Motie Birjandi, Mohsen Pourfallah**
Paper Title:	**Optimal coordination of Overcurrent and Distance Relays by a New Particle Swarm Optimization Method**

Abstract: Nowadays, overcurrent relays play more important impression role on protection of power systems and the existence of distance relay accost of overcurrent relay causes protection increment and also complicating coordination between these relays. In recent years, intelligent optimal methods are being used more in comparison of mathematic optimal methods because of advantages -such as solving non linear problems; up speed; avoid using complicated mathematic problems, etc.

For coordination of relays, at first, with detection of critical points, short circuit is done in those locations, then problem constraints are generated and the problem is solved by new method. In this paper, new method - named LP-PSO- has been suggested. This model is a combination of Linear Programming and Particle Swarm Optimization. The aim of LP (Linear Programming) is to decrease object function in any way that there are some constraints. Executed studies and comparison of results with other optimal method –Genetic algorithm -presents that coordination of relays has been done favorable.

Keywords: Overcurrent and Distance relay, Optimal coordination, PSO algorithm, Linear programming.

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18.	**Authors:**	**Rashmi Bahal, Shyam Akashe, Arun Agrawal**
	Paper Title:	**Probabilistic Analytical Framework To Minimize Expected Leakage By Employing A Dual Vth Design Technique**

Abstract: The growing demand in the multimedia rich applications are motivating the low-power and high-speed circuit designer to work more closely towards the design issues arising from the design trade-offs in power and speed. This paper targets the modeling and simulation of leakage currents and its minimization approach by Dual Vt approach. We consider the optimal selection of Vth under a statistical model of threshold variation. Probabilistic analytical models are introduced to account for the impact of Vth uncertainty on leakage power and timing slack. Using this model, we show that the non-probabilistic analysis significantly underestimates the leakage power.

Keywords: Dual Vth, high-speed, leakage current, Probabilistic analytical models

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19.	**Authors:**	**Manojeet Roy, Ajay Kushwaha**
	Paper Title:	**Mining for Web User Need**

Abstract: Two fundamental issues regarding the effectiveness of information gathering from the Web: mismatch and overload. Mismatch means some useful and interesting data has been overlooked, whereas overload means some gathered data is not what users want. Classification and clustering has become an increasingly popular method of multivariate analysis over the past two decades, and with it has come a vast amount of published material. Since there is no journal devoted exclusively to cluster analysis as a general topic and since it has been used in many fields of study. Traditional techniques related to information retrieval (IR) have touched upon the fundamental issues [1], [2].However; IR-based systems neither explicitly describe how the systems can act like users nor discover exotic knowledge from very large data sets to answer what users really want. it is challenging to use semantic relations of "kind-of", "part-of", and "related-to" and synthesize commonsense and expert knowledge in a single computational model.

Keywords: Web mining, clustering, similarity search.

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20.

Authors: **R. M. Potdar, Anil Mishra, Somesh Yadav**

Paper Title: **Real Time Squint Eye Detection**

Abstract: This paper provides a survey on Real Time Squint Eye Detection. This is due to defective binocular vision which causes Vision loss in the turned eye. The eyes need to be straight for the brain to combine the images seen by the two eyes into a single picture. This gives us 3-D vision, which allows us to judge depth. Any turn of the eye can interrupt 3-D vision, if an eye turns in, it can reduce the total field of vision. Over the years, many methodologies have been developed to detect squint eye. In this paper, we have proposed an overview on squint eye detection system and their classification with some drawback and basic assumption for squint eye detection[1][2].

Keywords: Hough transform, image Processing, modelling, projection function, segmentation.

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21.

Authors: **Gurudatt Kulkarni, Prasad Khatawkar, Jayant Gambhir**

Paper Title: **Cloud Computing-Platform as Service**

Abstract: Cloud computing is an increasingly popular paradigm for accessing computing resources. In practice, cloud service providers tend to offer services that can be grouped into three categories: software as a service, platform as a service, and infrastructure as a service. This paper discuss the characteristics and benefits of cloud computing. The advantages in using the cloud for start-up and small businesses that lack infrastructure have been shown to far outweigh the disadvantages. Cloud platform services, also known as Platform as a Service (PaaS), provide a computing platform or solution stack on which software can be developed for later deployment in a cloud.

Keywords: PaaS, SaaS, Cloud, Auto-scaling.

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22.

Authors: **H. B. Kekre, Tanuja Sarode, Sudeep D. Thepade, Supriya Kamoji**

	Paper Title:	**Performance Comparison of Various Pixel Window Sizes for Colorization of Grayscale Images using LBG, KPE, KFCG and KEVR in Kekre's LUV Color Space**	
	Abstract: Colorization is a computer aided process of adding colors to a grayscale image or videos. The paper presents the use of assorted window sizes and their impact on colorization of grayscale images using four different Vector Quantization (VQ) Codebook generation techniques used with Kekre's LUV color space. Also the paper analyses performance of Vector Quantization Algorithms Linde Buzo and Gray Algorithm (LBG) , Kekre's Proportionate Error (KPE) Algorithm, Kekre's Fast Codebook Generation Algorithm (KFCG) and Kekre's Error Vector Rotation (KEVR) Algorithm for colorization of grayscale images. Experimentation is conducted on Kekre's LUV color space for the different pixel windows of sizes 1x2, 2x1, 2x2, 2x3, 3x2, 3x3, 1x3, 3x1, 2x4, 4x2, 1x4 and 4x1 to compare results obtained across various grid sizes. The results shows that the KPE performs better for colorization with pixel window sizes 1x2 and 2x1 in Kekre's LUV color space. **Keywords:** Colorization, Color spaces, Vector Quantization, LBG, KPE, KEVR, KFCG. **References:** 1. G V. Karthikeyani, K. Duraisamy, Mr.P.Kamalkakkannan, "Conversion of grayscale image to color image with and without texture synthesis", IJCSNS International journal of Computer science and network security, Vol.7 No.4 April 2007. 2. E.Reinhard, M. Ashikhmin, B. Gooch and P Shirley, "Colour Transfer between images", IEEE Transactions on Computer Graphics and Applications 21, 5, pp. 34-41. 3. Rafael C. Gonzalez & Paul Wintz, " Digital Image Processing", Addison Wesley Publications, May 1987. 4. A. Hertzmann, C. E Jacobs, N. Oliver, B. Curless and D.H. Salesin, "image Anologies", in the proceedings of ACM SIGGRAPH 2002, pp. 341-346. 5. G. Di Blassi, and R. D. 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Kekre, Dr.Tanuja Sarode, Dr. Sudeep Thepade , Ms. Supriya Kamoji "Analysing Assorted Window Sizes with LBG and KPE Codebook Generation Techniques for Grayscale Image Colorization", International Journal of Computer Science and Information Security (IJCSIS) , Vol 9, Issue 6, pp 134-138. 24. Dr. H.B. Kekre, Dr.Tanuja Sarode, Dr. Sudeep Thepade , Ms. Supriya Kamoji "Performance Analysis of Various Window Sizes for Colorization of Grayscale Images using LBG and KFCG Vector Quantization Codebooks in RGB and Kekre's LUV Color Spaces" International Journal of Soft Computing and Engineering (IJSCE) ISSN: 2231-2307, Volume 1, Issue 4, pp 148-153. 25. H. B. Kekre, Tanuja K. Sarode, "New Clustering algorithm for vector quantization using rotation of error vector", International Journal of computer and Information Security, Vol .7,No 3,2010.	**121-125**
23.	**Authors:**	**Mridu Sahu, Poonam Yerpude**	
	Paper Title:	**Vector Approximation File: Cluster Bounding in High-Dimension Data Set**	
	Abstract: In many modern application ranges high-dimensional feature vectors are used to model complex data sets. We have proposed an overview about efficient indexing method for high-dimensional database using an filtering approach known as vector approximation approach which supports the nearest neighbor search efficiently And A cluster distance bound based on separating hyper planes, that complements our index in electively retrieving clusters that contain data entries closest to the query. The Creation of approximation for Vectors for use in similarity (also	**126-130**

known the retrieval of k-nearest neighbor) is examined.

Keywords: Similarity Search, indexing, vector quantization, clustering, Nearest Neighbor search.

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24.

Authors:	**Naveen Choudhary**
Paper Title:	**Deadlock Free Routing in Irregular Interconnection Networks for Complex SoCs**

Abstract: Networks-on-Chip (NoC) is recently proposed as an alternative communication infrastructure/Interconnection Network for address the high communication demands of the complex futuristic SoCs. Most researchers advocate the use of traditional regular networks like meshes as architectural templates which gained a high popularity in general-purpose parallel computing. However, most SoC platforms are special-purpose tailored to the domain-specific requirements of their application. They are usually built from a large diversity of heterogeneous components which communicate in a very specific, mostly irregular way. In such systems the size and nature of cores may vary quite widely making the topology irregular. Moreover regular topologies can become irregular due to faults in links and switches. In such scenario topology agnostic routing algorithms are generally required. In this paper, a survey of various deadlock free table based routing function is presented. The paper presents survey of deadlock free routing function with and without the availability of virtual layers

Keywords: Interconnection Networks, System on Chip, Routing, Deadlock, Virtual Layers

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25.	**Authors:**	**Shailesh R. Thakare, C.A. Dhawale, Ajay B.Gadicha**
	Paper Title:	**Design Distributed Database Strategies for SQMD Architecture**

Abstract: Database is not static but rapidly grows in size. These issues include how to allocate data, communication of the system, the coordination among the individual system, distributed transition control and query processing, concurrency control over distributed relation, design of global user interface, design of component system in different physical location, integration of existing database system security. The system architecture makes use of software portioning of the database based on data clustering, SQMD (Single Query Multiple Database) architecture, a web services interface and virtualization software technologies. The system allows uniform access to concurrently distributed database, using SQMD architecture. In this Paper explain Design Strategies of Distributed Database for SQMD architecture.

Keywords: SQMD, Global User Interface

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