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1.	<b>Authors:</b>	<b>Shirish Tripathi</b>		
	<b>Paper Title:</b>	<b>Design of Low Glitch Dynamic Phase Detector for Delay Locked Loop</b>		
	<p><b>Abstract:</b> A simple Low Glitch Dynamic Phase Detector is proposed in this paper. The Dynamic PD helps Delay Locked Loop to achieve phase error detection in high speed synchronous circuits and plays an important role in improving the performance of the complete DLL block. A high speed, low glitch phase detector is proposed in 180 nm technology with VDD=1.8V in Cadence Schematic Composer for schematic capture, analog artist (Spectre) Tool for simulations and Virtuoso for layouts. The proposed PD is having a better phase sensitivity, phase noise and less power dissipation. Simulation results show that the proposed PD has low glitch as compared to conventional PD based on D flip-flop. So, the speed of the proposed Dynamic PD is also high.</p> <p><b>Keywords:</b> Delay Locked Loop, Phase Detector, Cadence, CMOS Technology.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Y. SINAN. HANAY, "Delay Locked Loop Design", ECE 658 Project, December 2007.</li> <li>2. C. JIA, "A Delay-Locked Loop for Multiple Clock Phases/Delays Generation, Doctoral Thesis, Georgia Institute of Technology, 2005.</li> <li>3. M. G. JOHNSON AND E. L. HUDSON, "A Variable Delay Line PLL for CPU-Coprocessor Synchronization," IEEE J. Solid-State Circuits, vol. 23, pp. 1218-1223, Oct. 1988.</li> <li>4. M. MANSURI, D. LIU AND C. K. K. YANG, "Fast Frequency Acquisition Phase-Frequency Detectors for GSamples/s Phase-Locked Loops," IEEE J. Solid-State Circuits, vol. 37, pp. 1331-1334, Oct. 2002.</li> </ol>		1-4	
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	<b>Paper Title:</b>	<b>Nonlinear Digital PID Controller for Position Controlled Electric Drive Systems</b>		
	<p><b>Abstract:</b> This paper discusses the implementation of Nonlinear digital PID controller for position controlled electric drive systems. The drawback with PD controller is that it produces a non aperiodic response, when it encounters a maximum torque limit. To overcome this drawback, the nonlinear PD controller is redesigned so to produce aperiodic response. The applicability of PD controller is limited only for the cases of reference input changes, while along with reference input, if disturbance inputs are also considered, the output results in a steady state error (S.S.E), which is proportional to the disturbance value. To minimize the S.S.E while producing a strong aperiodic response, it is proposed to implement a nonlinear digital PID controller. The proposed scheme in this paper is compared with the linear mode, is implemented in MATLAB and from the obtained results its possible use, limitations and counter measures have been studied.</p> <p><b>Keywords:</b> Anti wind-up, non linear PID controller, PD controller, quantizer, S.S.E, torque limiter.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. H. K. Khalil, Nonlinear Systems, third edition. Prentice Hall, 2000.</li> <li>2. J Alvarez-Ramirez, R Kelly, I Cervantes, "Semiglobal stability of saturated linear PID control for robot manipulators"- Automatica, 2003, Elsevier.</li> <li>3. PR Ouyang, WJ Zhang, FX Wu, "Nonlinear PD control for trajectory tracking with consideration of the design for control methodology"- IEEE Transactions on Robotics and Automation, 2002</li> <li>4. Discrete-time control systems, K.Ogata, Prentice Hall 1995.</li> <li>5. S. Kulkarni and M. A. El-Sharkawi, "Intelligent Precision Position Control of Elastic Drive Systems", IEEE Transactions on Energy Conversion, vol. 16, no. 1 March 2001, pp 26-31.</li> <li>6. Slobodan N. Vukosavic, Digital control of electric drives, Springer, 2007, pp ___-___.</li> <li>7. Rao V. Dukkipati, "Analysis and design of control systems using MATLAB", New age, 2006.</li> <li>8. C. Bohn and D. P. Atherton. An analysis package comparing pid antiwindup strategies. IEEE Systems Magazine, 15(2):34-40, April 1995.</li> <li>9. Digital control in power electronics, Simone Buso and Paolo Mattavelli, ISBN - 10: 1598291130, 2006 by Morgan &amp; Claypool.</li> </ol>		5-8	
3.	<b>Authors:</b>	<b>A. Srinagesh, K. Aravinda, G. P. Saradhi Varma, A. Govardhan, M. Sree Latha</b>		
	<b>Paper Title:</b>	<b>A Modified Shape Feature Extraction Technique for Image Retrieval</b>		
	<p><b>Abstract:</b> Semantic based Image retrieval is an emerging research area and is currently the mainstay in variety of applications or domains. In recent times, there exists a lot of gap between the high level semantics and low level features. The process of Features extraction is Application-specific or options are limited. In this paper, we propose a new Modified Shape Descriptor (MSD) feature extraction technique which is used as descriptive feature to discriminate Objects in an image database. In Object recognition after initial Pre-processing, feature extraction is the next crucial step which determines the efficiency of the technique or method. In our approach, a test image is taken from the database, which is then divided into 8x8 Blocks each; shape structure is detected using edge detection technique with Threshold method to generate the shape feature vector. Then, texton-based texture, color features are extracted using the existing Multi-texton Histogram (MTH) method. To form the final discriminating feature vector for that image in total, three features are extracted namely shape, texture and color for that particular image to form a discriminating feature vector which this then stored in a feature library. When a query image is given Euclidean distance between the query image and the test images feature values available in the feature library are computed. Based on the similarity characteristics top-k images are retrieved. Our proposed method gives better results when compared with other existing techniques.</p> <p><b>Keywords:</b> Content-based image retrieval, Pattern Recognition, Image Retrieval, Multi-texton Histogram, Shape Descriptor.</p>		9-13	

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**Authors:**

**M. N. Praphul, K. R. Nataraj**

**Paper Title:**

**FPGA Implementation of Hybrid Cryptosystem**

**Abstract:** With the development of Computer Network and Communication Technology, a great mass of data and information need to be exchanged by public communication networks. High efficiency and high safety of data transmission become much more important. There are several information encryption algorithms of which, Advanced Encryption Standard (AES) and Rivest Shamir Adleman (RSA) are widely used two algorithms of symmetric encryption technology and asymmetric encryption technology respectively. The existing symmetric scheme-AES algorithm provides high speed stream for large data and uses less amount of computer resources but induces less degree of security in large amount of data. The asymmetric cryptographic algorithm or a public key cryptographic algorithm-RSA is more secure comparatively, as it has two keys one for encryption and another one for decryption, but is much slower and uses a huge amount of computer resources. In order to cope up with these short comings, a proposal to use an improved version of the hybrid encryption scheme is done, which is a combination of Advanced Encryption Standard (AES) and Rivest Shamir Adleman (RSA) with cross encrypted keys for secure key exchange and hybrid encryption for enhanced cipher-text security. This system is implemented on Spartan 3 FPGA using VHDL as the programing language.Synthesizing and implementation of the code is carried out on Xilinx -Project Navigator, ISE 12.1i suite.

**Keywords:** Advanced Encryption Standard (AES), FPGA, hybrid encryption, Rivest Shamir Adleman (RSA).

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5.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Oinam Suchitra Devi, Hemanth Kumar P, S. Basavaraj Patil</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Novel Compression Techniques for Time Series Signals</b></td> </tr> </table>	<b>Authors:</b>	<b>Oinam Suchitra Devi, Hemanth Kumar P, S. Basavaraj Patil</b>	<b>Paper Title:</b>	<b>Novel Compression Techniques for Time Series Signals</b>	
<b>Authors:</b>	<b>Oinam Suchitra Devi, Hemanth Kumar P, S. Basavaraj Patil</b>					
<b>Paper Title:</b>	<b>Novel Compression Techniques for Time Series Signals</b>					
	<p><b>Abstract:</b> A time series signal can be defined as a sequence of data items which is measured through repeated measurements over uniform time intervals. Time series analysis comprises techniques for analyzing time series data in order to obtain meaningful statistics and other characteristics of the data transmission time. Compression is the techniques of reduction in size of data in order to save space or transmission time. Wavelet compression technique is a form of data compression well defined for image compression. The design of time series signal compression techniques involves trade-offs among various factors which includes the degree of compressing the data, the amount of distortion introduced and the computational resources required to compress and decompress the time series data. This paper analyzes different wavelet compression techniques like Wavelet Decomposition, Wavelet Packet, Decimated Discrete Wavelet, Fixed encoding, Huffman encoding and Novel Encoding Compression technique. Analyzing this paper discuss about novel approach for compressing time series signal. There exist several measures to know the quality of the reconstructed time series signal after compression of signal data. The most popularly used measured parameters are Percentage Root mean square Difference (PRD), Peak Signal to Noise Ratio (PSNR) and Maximal Absolute Difference (MAD) etc. From the results it is observed that Novel Compression Encoding technique gives better performance in compression of time series signal as it achieve high PSNR with better quality of compression, smaller PRD and MAD with less distortion compare to other compression techniques.</p> <p><b>Keywords:</b> Decimated Discrete Wavelet, Fixed encoding, Huffman encoding, Wavelet Decomposition, Wavelet Packet.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Goudarzi, M.M, and Moradi, H. M., 2005, "Electrocardiogramsignal compression Using multiwavelet transform," Transactions on Engineering, Computing and Technology.</li> <li>Benzid, R., Marir, F., and Bouguechal, N. E., 2006, "Qualitycontrolled compression method using wavelet transform for electrocardiogram signals," International Journal of Biomedical Science.</li> <li>Benzid, R., Marir, F., Benyoucef, M., and Arar, D., 2003, "Fixed percentage of wavelet coefficients to be zeroed for ECG compression "Electronics Letters Vol 39 No 11.</li> <li>Bell, T.C.,Cleary, J.G.,W., Written, I.H., Text Compression, (Prentice Hall, Englewood Cliffs (1990)).</li> <li>Donoho, D.L., Vetterli, M., DeVore, R.A., Daubechies, I., "Data Compression and Harmonic Analysis", IEEE Trans . Inf. Theory.</li> <li>H.C.Liu and G.L. Zick , "Automatic determination of scene changesnin MPEG compressed video," in Proc.ISCAS –IEEE Int .Symp.Circuits and System, 1995.</li> <li>J. M. Shapiro. Embedded image coding using zerotrees of wavelet coefficients .IEEE Trans. Signal Processing.</li> <li>D. Sinha and A. Tewfik. Low bit rate transparent audio compression using adapted wavelets. IEEE Trans. Signal Processing, 1993.</li> <li>R. Baraniuk. Optimal tree approximation using wavelets. In A. J. Aldroubi and M. Unser, editors, Wavelet Applications in Signal Processing, volume VII, pages 196–207. SPIE, 1999.</li> <li>Blelloch, E., 2002. Introduction to Data Compression, Computer Science Department, Carnegie Mellon University.</li> <li>Phillips, Dwayne, "LZW Data Compression," The Computer Applications Journal, Circuit Cellar Ink, vol. 27, June/July 1992.</li> <li>Al-Nashash, H. A. M., 1994, "ECG data compression using adaptive Fourier coefficients estimation", Med. Eng. Phys., Vol. 16.</li> </ol>	20-25				
	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Prajakta K. Sarolkar, Meghna Nagori</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Planned Events Across Social Media Sites Using Association Rule Mining Based on Autocorrelation</b></td> </tr> </table> <p><b>Abstract:</b> User-contributed Web data contains rich and diverse information about a variety of events in the physical world, such as shows, festivals, conferences and more. This information ranges from known event features (e.g., title, time, location) posted on event aggregation platforms (e.g. Event Brite, Face book events) to discussions and reactions related to events shared on different social media sites (e.g., Twitter, YouTube, Flickr). In this paper, we propose the challenge of automatically identifying user-contributed content for events that are planned and, therefore, known in advance, across different social media sites. We mine event aggregation platforms to extract event features, which are often noisy or missing. We use these features to develop query formulation strategies for retrieving content associated with an event on different social media sites.</p>	<b>Authors:</b>	<b>Prajakta K. Sarolkar, Meghna Nagori</b>	<b>Paper Title:</b>	<b>Planned Events Across Social Media Sites Using Association Rule Mining Based on Autocorrelation</b>	
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6.	<p><b>Keywords:</b> Propose the challenge of automatically identifying user-contributed.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. E. Agichtein, C. Castillo, D. Donato, A. Gionis, and G. Mishne. Finding high-quality content in social media. In Proceedings of the First ACM International Conference on Web Search and Data Mining (WSDM '08), 2008.</li> <li>2. J. Allan, editor. Topic Detection and Tracking: Event-based Information Organization. Kluwer Academic Publisher, 2002.</li> <li>3. H. Becker, F. Chen, D. Iter, M. Naaman, and L. Gravano. Automatic identification and presentation of Twitter content for planned events. In Proceedings of the Fifth International AAAI Conference on Weblogs and Social Media (ICWSM'11), 2011.</li> <li>4. H. Becker, M. Naaman, and L. Gravano. Learning similarity metrics for event identification in social media. In Proceedings of the Third ACM International Conference on Web Search and Data Mining (WSDM '10), 2010.</li> <li>5. H. Becker, M. Naaman, and L. Gravano. Beyond trending topics: Real-world event identification on Twitter. In Proceedings of the Fifth International AAAI Conference on Weblogs and Social Media (ICWSM '11), 2011.</li> <li>6. H. Becker, M. Naaman, and L. Gravano. Selecting quality Twitter content for events. In Proceedings of the Fifth International AAAI Conference on Weblogs and Social Media (ICWSM '11), 2011.</li> <li>7. E. Benson, A. Haghighi, and R. Barzilay. Event discovery in social media feeds. In Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (ACL-HLT '11), 2011.</li> <li>8. R. Crane and D. Sornette. Robust dynamic classes revealed by measuring the response function of a social system. Proceedings of the National Academy of Sciences, 105(41):15649-15653, 2008.</li> <li>9. W. B. Croft, D. Metzler, and T. Strohman. Search Engines: Information Retrieval in Practice. Addison-Wesley Publishing Company, 2009.</li> <li>10. W. Dakka and P. G. Ipeirotis. Automatic extraction of useful facet hierarchies from text databases. In Proceedings of the IEEE 24th International Conference on Data Engineering (ICDE '08), 2008.</li> <li>11. N. Diakopoulos, M. Naaman, and F. Kivran-Swaine. Diamonds in the rough: Social media visual analytics for journalistic inquiry. In Proceedings of the IEEE Symposium on Visual Analytics Science and Technology (VAST '10), 2010.</li> <li>12. Events, 2002. In Stanford Encyclopedia of Philosophy. Retrieved June 2nd, 2010 from <a href="http://plato.stanford.edu/entries/events/">http://plato.stanford.edu/entries/events/</a>.</li> <li>13. V. Hatzivassiloglou, L. Gravano, and A. Maganti. An investigation of linguistic features and clustering algorithms for topical document clustering. In Proceedings of the 23rd ACM International Conference on Research and Development in Information Retrieval (SIGIR '00), 2000.</li> </ol>	26-28				
7.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Imlitoshi Jamir, Leo Satminlien Singsit</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Improved IPTV Services in IPv4 and IPv6 Environments Based on Wireless Networks</b></td> </tr> </table> <p><b>Abstract:</b> Today's modern Internet Technology is based on Internet Protocol for all means of communication between two end systems. The current Internet usage is predominantly dominated by IPv4 version of IP but due to the outburst in the number of Internet users in the past years IPv4 addresses will soon be depleted. IPv4 provided a limited address space so there is a need to move to IPv6 which is an enhancement over its older version and overcomes most of the drawback seen in the earlier version. However migrating to IPv6 from IPv4 would be a herculean task since the present infrastructure is built to suit the IPv4 environment. Here in this paper the primary objective is to implement IPTV by considering the Video on Demand services. The network type is converted to WaveLan for effective bandwidth utilization and efficient communication. The present work here involves 2 types of works. First TCP IPv4 based work and second is TCP IPv6 Based work, where the TCP IPv6 Based work is again comprised of the outcome without optimization and with optimization. The presented work is expected to improve the network QOS and the network reliability in case of overloading and underloading conditions. We performed the various simulations on Network Simulator 2.35 and analyzed the three types of traffic. Video on Demand services generally involves transmitting huge amount of data over such networks requiring a considerable data rate.</p> <p><b>Keywords:</b> AODV, DVB-IPTV, IPTV, VOD.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Yang Xiao, Xiaojiang Du, Jingyuan Zhang, Fei Hu, Sghaier Guizani, "IPTV the Killer Application for the next generation Internet", IEEE 2007.</li> <li>2. Benjamin Alfonsi (2005), "I want my IPTV, IPTV predicted winner", IEEE 2005.</li> <li>3. C. Perkins, "Ad hoc On-Demand Distance Vector (AODV) Routing", Request for Comments: 3561, 2003.</li> <li>4. Digital Video Broadcasting (DVB), Transport of MPEG-2 TS Based DVB Services over IP Based Networks (DVB-IPTV Phase 1.4) DVB BlueBook A086 Rev.7 2008.</li> <li>5. Eugen Mikóczy (2010), "Personalization of Internet Protocol Television (IPTV) Services in Next-Generation Networks (NGN) Architectures", IEEE 2010</li> <li>6. Hiroaki Hazeyama, "How much can we survive on an IPv6 network?", AINTEC 2011.</li> <li>7. Jordi Mongay Batalla and Piotr Krawiec, "On Implementing IPTV Platform with IPv4 and IPv6 Devices", Journal of Telecommunication and Information Technology 2011.</li> <li>8. Kuo-Chang Chen, "The Open Source IPTV Service Development Environment- IPTV Service Execution Environment", ICUIMC 2010.</li> <li>9. Shuai Qu, Jonas Lindqvist, and Claus Popp Larsen, "Experimental IPTV and IPv6 Extended Provisioning in a Virtual Testbed", ICN 2011.</li> </ol>	<b>Authors:</b>	<b>Imlitoshi Jamir, Leo Satminlien Singsit</b>	<b>Paper Title:</b>	<b>Improved IPTV Services in IPv4 and IPv6 Environments Based on Wireless Networks</b>	29-31
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	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Sonia Hammami</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Nonlinear Observer Design for Chaotic Systems Synchronization with Known or Unknown Parameters</b></td> </tr> </table> <p><b>Abstract:</b> This paper deals with the nonlinear observer-based synchronization problem for coupled chaotic systems. At the outset, complete synchronization conditions of coupled chaotic systems for known master and slave systems parameters, is provided. The active control law developed is based on the use of aggregation techniques for error dynamics stability study and the arrow form matrix for systems description. Then, by the design of an adequate nonlinear state observer, a new synchronization scheme is formulated for two identical chaotic systems. As a final point, the proposed observer-based synchronization between two nearly identical chaotic systems with unknown parameters is carried out. Numerical simulations are presented to assess the performance and the efficiency of the proposed contributions.</p> <p><b>Keywords:</b> Aggregation techniques, Arrow form matrix, Chaotic systems, Synchronization, Nonlinear observer, Unknown parameters.</p>	<b>Authors:</b>	<b>Sonia Hammami</b>	<b>Paper Title:</b>	<b>Nonlinear Observer Design for Chaotic Systems Synchronization with Known or Unknown Parameters</b>	
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9.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Y. Y. Nandurkar, S. S. Akant, S. L. Bankar, R. G. Bodkhe</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Alternative Fuels for IC Engines</b></td> </tr> </table> <p><b>Abstract:</b> The main purpose of fuel is to store energy, which should be in a stable form and can be easily transported to the place of production. Almost all fuels are chemical fuels. We as a user use this fuel to perform mechanical work, such as powering an engine. The historical and the present-day civilization are closely interwoven with energy and in future, our existence will be more dependent upon energy. The conventional sources of energy, the single most important pre-requisite for power generation, are depleting fast. The world is heading towards a global energy crisis mostly due to running out of these energy sources; decreasing the dependency on fossil fuels is recommended. Yet, the sources of energy are infinite. The greatest task today is to exploit the non-conventional energy resources for power generation. Alternative energy sources provide many benefits. Renewable energy development can create quality jobs and promote economic development, especially in rural areas. If used to diversify utility resource portfolios, alternative energy technologies can provide a hedge against rising fuel prices and can be valuable risk management tools.</p> <p><b>Keywords:</b> Decreasing the dependency on fossil fuels is recommended.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. "Batteries, Supercapacitors, and Fuel Cells: Scope". Science Reference Services. 20 August 2007.</li> <li>2. <a href="http://www.loc.gov/rr/scitech/tracer-bullets/batteriestb.html#scope">http://www.loc.gov/rr/scitech/tracer-bullets/batteriestb.html#scope</a>. Retrieved 11 February 2009.</li> <li>3. "Fuel Cell Basics: Benefits". Fuel Cells 2000.</li> <li>4. <a href="http://www.fuelcells.org/basics/benefits.html">http://www.fuelcells.org/basics/benefits.html</a>.</li> </ol>	<b>Authors:</b>	<b>Y. Y. Nandurkar, S. S. Akant, S. L. Bankar, R. G. Bodkhe</b>	<b>Paper Title:</b>	<b>Alternative Fuels for IC Engines</b>	39-45
<b>Authors:</b>	<b>Y. Y. Nandurkar, S. S. Akant, S. L. Bankar, R. G. Bodkhe</b>					
<b>Paper Title:</b>	<b>Alternative Fuels for IC Engines</b>					
	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>M. N. Balakrishna, M. C. Nataraja</b></td> </tr> </table>	<b>Authors:</b>	<b>M. N. Balakrishna, M. C. Nataraja</b>			
<b>Authors:</b>	<b>M. N. Balakrishna, M. C. Nataraja</b>					

	<b>Paper Title:</b> <b>Proportioning of Fly Ash Concrete Mixes A Comprehensive Approach</b>
<b>10. References:</b>	<p><b>Abstract:</b> The Concrete as a material synonymous with strength and longevity has emerged as the dominant construction material for the infrastructure needs of the 21st century. In addition to being durable, concrete is easily prepared and fabricated from readily available constituents and is therefore widely used in all types of structural systems. However, the environmental drawbacks of cement production have come under increased scrutiny as expanding industrialization and urbanization fuel the accelerated growth of infrastructure worldwide. As a consequence of that, Fly ash is one such supplementary cementing material which in turn more concern about environmental and cost-effective objectives. In this research investigation, the influencing factors of Fly ash and Cement to arrive at appropriate combinations so to satisfy the requirement of placement, development of strength with age has been examined. Also in this investigation that, the applicability of Generalized Abrams law [1] developed for single cementing materials has been examined to two components like Cement and Fly ash. In addition to that, with the determination of workability and strength of trail mix at different ages, how adjustments can be made in water/cementitious ratio in order to arrive at matching micro-structure in hardened states, so as to result in strength development of Fly ash cement concrete mixes, in turn to obtain identical strength levels are to be investigated. Analysis of experimental data reveals that even with high grade of cement, Fly ash admixture could not be effective despite the fineness requirement is satisfied provided if carbon content is high. On the contrary if Fly ash satisfies fineness consideration without unburnt carbon, the development of strength could not approach as that of normal concrete at later ages provided when the grade of cement is not high enough such as 53 grade of cement. Thus finally in order to achieve judicious combinations of Fly ash and Cement in concrete mixes, its very essential to satisfy the requirement of cementitious materials like grade of cement, fineness of Fly ash with very low unburnt carbon content.</p> <p><b>Keywords:</b> Fly ash, Mix proportioning; Cementitious materials; Fineness; Grade of concrete; Age of Concrete; Compressive strength.</p> <ol style="list-style-type: none"> <li>Abrams, Duff., "Design of Concrete Mixtures", Bulletin No.1, Structural materials Research Laboratory Lewis Institute, Chicago, 1918, 20 pp.</li> <li>Nagaraj,T.S., Shashiprakash, S.G., and Kameshwara Rao, B., "Generalized Abrams Law", Paper for Rilem colloquium, Properties of Fresh Concrete, Hanover, Federal Republic of Germany, Oct 1990, pp.242-252.</li> <li>Fulton AA and Marshall WT. "The use of fly ash and similar materials in concrete", Proc. Inst. Civil Eng. 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<b>Authors:</b>	<b>Gaurav Aggarwal, Pooja Sehrawat, Neha Charaya</b>
<b>Paper Title:</b>	<b>Improving the Joint Attention and Intelligibility in Speech of Autistic Children by an Assistive Robot</b>
	<p><b>Abstract:</b> This paper presents an assistive robot for the children with autism to improve their joint attention and intelligibility in the speech over some traditional approaches for rehabilitation of children with autism spectrum disorder (ASD) where the robot can detect the affective cues of the children implicitly and response to them appropriately. Autism spectrum disorder (ASD) is a developmental brain disorder that is characterized by abnormal social behaviour, reduced interest in communicating with others, language disorders, repetitive and obsessive behaviours and rituals and narrowly focused rigid interests. A reinforcement learning based adaptation mechanism is employed to allow the robot to adjust its behaviors autonomously as a function of the predicted children's affective state. Although there is no definite treatment or medicine for autism so doctors and therapists can help kids over some kind of difficulties by different psychological and physical therapies. In the above scenario robot detect the child attention at each session. We detect the child attention by reading the child eye gaze pattern and improve the intelligibility by using some training data. Here robot is able to change the scenarios according to the performance of the child.</p>

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12.	<p><b>Authors:</b> Prashanth N. G, Manojkumar S. B, Balaji B. S, Naveena Pai G, Havyas V. B</p> <p><b>Paper Title:</b> Design and Synthesis of Reversible Fault Tolerant Carry Skip Adder/Subtractor</p> <p><b>Abstract:</b> Reversible logic will be having more demand in future computation technology because of its zero power dissipation under ideal conditions. This paper proposes the fault tolerant carry skip adder/subtractor by using parity preserving reversible logic gates. According to the control logic input the proposed design can works as a carry skip adder or carry skip subtractor.</p> <p><b>Keywords:</b> Reversible Logic Gates, Parity Preserving reversible Logic Gates, Full Adder/Subtractor, Parallel Adder/Subtractor, Carry Skip Adder/Subtractor.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>R. Landauer, "Irreversibility and Heat Generation in the Computational Process", IBM Journal of Research and Development, 5, pp. 183-191, 1961.</li> <li>C.H. Bennett, "Logical Reversibility of Computation", IBM J. Research and Development, pp. 525-532, November 1973.</li> <li>B. Parhami, "Fault tolerant reversible circuits", in Proceedings of 40th Asimolar Conf. Signals, Systems, and Computers, Pacific Grove, CA, pp. 1726-1729, October 2006.</li> <li>E. Fredkin and T. Toffoli, "Conservative logic", Intl. Journal of Theoretical Physics, pp. 219-253, 1982. B.</li> <li>R. Feynman, "Quantum mechanical computers", Optical News, vol. 11, 1985, pp. 11-20.</li> <li>M. S. Islam, M. M. Rahman, Z. Begum, M. Z. Hafiz and A. A. Mahmud, "Synthesis of fault tolerant reversible logic circuits", In Proc. IEEE International Conference on Testing and Diagnosis, Chengdu, China, 28-29 April, 2009.</li> <li>Islam S. and M. Mahbur Rahman, 2009b. "Efficient Approaches for Designing Fault Tolerant Reversible Carry Look-Ahead and Carry-Skip Adders", MASAUM Journal of Basic and Applied Sciences, 1(3): 354-360.</li> <li>Majid Haghparast and Keivan Navi, "A Novel Fault Tolerant Reversible Gate For Nanotechnology Based Systems", American Journal of Applied Sciences 5 (5): 519-523, 2008 ISSN 1546-9239</li> <li>Prashanth N G, Savitha A P, M.B.Anandaraju, Nuthan A C, "Design and Synthesis of Fault Tolerant Full Adder/Subtractor using Reversible Logic Gates". International Journal of Engineering Research and Applications (IJERA) ISSN: 2248-9622 Vol. 3, Issue 4, Jul-Aug 2013 pp137-142</li> <li>Himanshu Thapliyal, M.B Srinivas, "A New Reversible TSG Gate and Its Application for Designing Efficient Adder Circuits" arXiv preprint cs/0603091, 2006</li> <li>Parminder Kaur &amp; Balwinder singh Dhaliwal "Design of Fault Tolerant Full Adder/Subtractor Using Reversible Gates" 2012 International Conference on Computer Communication and Informatics (ICCCI -2012), Jan. 10 – 12, 2012, Coimbatore, INDIA</li> </ol>	55-58
	<p><b>Authors:</b> Veena Abraham, Soumen Basak, Sabi S</p>	



13.	<b>Paper Title:</b>	<b>Design of AXI4 Protocol Checker for SoC Integration</b>	59-65	
	<p><b>Abstract:</b> System-on-a-Chip (SoC) design has become more and more complex because Intellectual Property (IP) core with different functions are integrated within a single chip. Each IPs have completed design and verification but the integration of all IPs may not work together. The bus-based architecture has become the major integration methodology for implementing a SoC. The main issue is to ensure that the IP works correctly after integrating to the corresponding bus architecture. Advanced extensible interface 4 (AXI4) is an on chip bus architecture introduced by ARM to interact with its peripherals. A synthesizable AXI4 protocol checker which contains a set of rules to check on-chip communication properties accuracy is proposed to ensure proper SoC integration. A prototype of AXI4 Master and AXI Slave is also designed to generate the AXI4 signals. The protocol checker will continuously monitor the signals from AXI4 Master and AXI4 Slave to check whether any rule is broken or not. The proposed AXI4 protocol checker will check both the Write Channel and Read Channel transactions. As the AXI4 checker is synthesizable it can be used in FPGA (Field Programmable Gate Array) and Emulation where functional checks are difficult to detect and pin point. The AXI4 Master, AXI Slave and AXI4 protocol checker have been modeled using Verilog and implemented on Digilent Basys2 Spartan 3E FPGA board.</p> <p><b>Keywords:</b> System on a Chip, AXI4 protocol, Intellectual Property cor, Write Channel, Read channel.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. S. Pasricha, N. Dutt, On-Chip Communication Architectures: System on Chip Interconnect, Morgan Kaufmann, 2008.</li> <li>2. IBM, Core connect bus architecture. IBM Microelectronics. Available at <a href="http://www.ibm.com">http://www.ibm.com</a></li> <li>3. 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14.	<b>Authors:</b>	<b>Sarita Poonia, Mamtesh Nokhwal, Ajay Shankar</b>		66-70
	<b>Paper Title:</b>	<b>A Secure Image Based Steganography and Cryptography with Watermarking</b>		
<p><b>Abstract:</b> In this paper we uses the steganography and cryptography techniques with the watermarking so that to protect the particular information. Steganography is accomplished through hiding the information in the other information, thus by hiding the existence of the communicated information and steganography can be amplified by combining it with the cryptography and watermarking. And the cryptography is used for the security purpose. Cryptography uses two main styles or forms of encrypting data, symmetrical and asymmetrical. Watermarking technology is used for copyright protection of images, audios and videos. Watermarking process to signal modulation model. The basic idea of the proposed system is that it will allow an average user to securely transfer the text information by hiding them in a digital image file using the local characteristics within the image, which will provide a strong backbone for its security.</p> <p><b>Keywords:</b> Cryptography, PSNR, steganography, Water marking.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. N. Provos, "Defending Against Statistical Steganography," Proc 10th USENEX Security Symposium 2005.</li> <li>2. N. Provos and P. Honeyman, "Hide and Seek: An introduction to Steganography," IEEE Security &amp; Privacy Journal 2003.</li> <li>3. Steven W. Smith, The Scientist and Engineer's Guide to Digital Signal Processing.</li> <li>4. Katzenbeisser and Petitcolas,"Information Hiding Techniques for Stenography and Digital watermaking" Artech House, Norwood, MA. 2000.</li> <li>5. L. Reyzen And S. Russell, "More efficient provably secure Steganography" 2007.</li> <li>6. S.Lyu and H. Farid , "Steganography using higher order image statistics , " IEEE Trans. Inf. Forens. Secur. 2006.</li> <li>7. Venkatraman, s, Abraham, A. &amp; Paprzycki M." Significance of Steganography on Data Security " ,Proceedings of the International Conference on Information Technology : coding and computing , 2004.</li> <li>8. Fridrich, J ., Goljan M., and Hogeia , D ; New Methodology for Breaking stenographic Techniques for JPEGs. "Electronic Imaging 2003".</li> <li>9. <a href="http://aakash.ece.ucsb.edu/data_hiding/stegdemo.aspx">http://aakash.ece.ucsb.edu/data_hiding/stegdemo.aspx</a>.Ucsb data hiding online demonstration. Released on Mar .09,2005.</li> </ol>				

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	<b>Paper Title:</b>	<b>Generalized Black Hole Attack and Comparative Solution for MANET</b>	
	<p><b>Abstract:</b> MANET is widely used by defense and civilians for wide range of application. There are various applications in wide range of communication. It's various routing technique makes it more flexible for various operations. Mobile Ad-Hoc network which leads to an autonomous system, where station or nodes are connected with each other through air medium links. There is no boundary conditions on the nodes to join or leave the network, therefore the overall operation is being freely. MANET topology is dynamic that can change rapidly because the nodes move freely and it can organize themselves randomly. Such a property of the nodes makes the mobile Ad-Hoc networks unpredictable from the point of view of topology and scalability. In this paper we fetch the various attacks on MANET and compare the technique to various solutions of MANET infrastructure which does not possess attacks. This paper also contains the protocol which leads to protect the MANET by attacks.</p> <p><b>Keywords:</b> MANET, DSDV, DRI, Cross Checking, AODV.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Sanjay Ramaswamy, Huirong Fu, Manohar Sreekantaradhya, John Dixon and Kendall Nygard, "Prevention of Cooperative Black Hole Attack in Wireless Ad Hoc Networks" Department of Computer Science, IACC 258 North Dakota State University, Fargo, ND 58105.</li> <li>Charles E. Perkins, and Elizabeth M. Royer, "Ad-hoc On-Demand Distance Vector (AODV) Routing," Internet Draft, November 2002.</li> <li>Hongmei Deng, Wei Li, and Dharma P. Agrawal, "Routing Security in Wireless Ad Hoc Network," IEEE Communications Magazine, vol. 40, no. 10, October 2002.</li> <li>S. Marti et al, "Mitigating Routing Misbehavior in Mobile Ad Hoc Networks," 6th Int'l. Conference Mobile Comp. 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15.			<b>71-75</b>
	<b>Authors:</b>	<b>Priti Jadhao, Lalit Dole</b>	
	<b>Paper Title:</b>	<b>Implementation of Secure Authentication Scheme for Mobile Device</b>	

16.	<p><b>Abstract:</b> Authentication is a fundamental aspect of system security. It confirms the identity of any user trying to log on to a domain or access network resources. Due to the numerous advantages of authentication systems, it can be used in various applications. The common application involving authentication is, a computer program using a blind credential to authenticate to another program, Using a confirmation E-mail to verify ownership of an e-mail address, using an internet banking system, Withdrawing cash from an ATM .The main purpose of these systems is to validate the user's right to access the system and information, and protect against identity theft and fraud.</p> <p><b>Keywords:</b> Image Processing, Watermarking Techniques, Walsh code, DCT (Discrete Cosine Transform).</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Fermi National Accelerator Laboratory, Office of Science / U.S Department of Energy: Strong Authentication at Fermilab, Sept 2006</li> <li>2. Bin Hu, Qi Xie, Yang Li- Automatic verification of password based authentication protocols using smart card (2011).</li> <li>3. W. E. Burr, D. F. Dodson, W. T. Polk. Electronic Authentication Guideline. Technical Report 800-63, National Institute of Standards and Technology,2008 &lt;<a href="http://csrc.nist.gov/publications/nistpubs/800-63/SP800-63V1_0_2.pdf">http://csrc.nist.gov/publications/nistpubs/800-63/SP800-63V1_0_2.pdf</a>&gt;.</li> <li>4. CA.Managing strong Authentication: A Guide to Creating an Effective Management System, 2007.</li> <li>5. Fadi Aloul, Syed Zahidi and Wassim El-Hajj “Two factor authentication using mobile phones” in Pro 2009 IEEE/ACS International Conference on Computer Systems and Applications, ISBN: 978-1-4244-3807-5.</li> <li>6. Do van Thanh; Jorstad, I Jonvik, T, Do van Thuan “Strong authentication with mobile phone as security token” in Pro Mobile Adhoc and Sensor Systems, 2009. MASS '09. IEEE 6th International Conference on.</li> <li>7. Pernilla Stolpe Johansson “Economic aspects of web authentication” in Project Report for Information Security Course Linköping University, Sweden. In 2011.</li> </ol>	76-78				
17.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Suprava Das, Rakesh Ch. Balabantaray</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Hybrid Approach for Transliteration of Odia Named Entity to English</b></td> </tr> </table> <p><b>Abstract:</b> Transliteration of NAMED ENTITIES plays an important role for cross language information retrieval processes. This paper shows the design of a hybrid (rule based + fuzzy based) transliteration system for named entities of person, location, organizations written in Odia script to English (Roman Script). For this purpose, we have also created a database of specialized spelling i.e. location names, organization names...etc. which helped for performance improvement with accuracy 87%.</p> <p><b>Keywords:</b> Transliteration, Odia named entity, hybrid approach.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Ekbal Asif, Sudip Kumar Naskar and Sivaji Bandyopadhyay, “A Modified Joint Source-Channel Model for Transliteration”, Proceedings of ACL 2006, pp 191-198, 2006.</li> <li>2. Vijaya ,VP, Shivapratap and KP CEN(2009) “English to Tamil Transliteration using WEKA systeml International Journal of Recent Trends in Engineering, May 2009, Vol. 1, No. 1, pages: 498-500.</li> <li>3. Malik, “Punjabi Machine Transliteration System”, In Proceedings of the 21st International Conference on Computational Linguistics and 44th Annual Meeting of the ACL (2006), pages: 1137-1144.</li> <li>4. Haque, Dandapat, Srivastava, Naskar and Way (2009) “English—Hindi Transliteration Using Context-Informed PB-SMT: the DCU System for NEWS 2009l Proceedings of the 2009 Named Entities Workshop, ACL-IJCNLP 2009, pages 104–107,Suntec, Singapore, 7 August 2009. ACL and AFNLP.</li> <li>5. Monika Bhargava, M.Kumar, Sujoy Das, “Rule Based Hindi to English Transliteration System for Proper Names”, (IJCSIS) International Journal of Computer Science and Information Security, Vol. 10, No. 8, August 2012.</li> <li>6. Lehal G.S and Saini T.S., “A Hindi to Urdu Transliteration System”, Proceedings of ICON, pp 235-240, 2010</li> </ol>	<b>Authors:</b>	<b>Suprava Das, Rakesh Ch. Balabantaray</b>	<b>Paper Title:</b>	<b>Hybrid Approach for Transliteration of Odia Named Entity to English</b>	79-82
<b>Authors:</b>	<b>Suprava Das, Rakesh Ch. Balabantaray</b>					
<b>Paper Title:</b>	<b>Hybrid Approach for Transliteration of Odia Named Entity to English</b>					
18.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Davesh Singh Som, Parma Nand Astya, Ankur garg</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>A Comparative Performance Analysis of AODV, DSR and TORA Routing Protocols in MANETs</b></td> </tr> </table> <p><b>Abstract:</b> A mobile ad hoc network is a collection of autonomous mobile nodes that communicate with each other over wireless links. It is seen that mobile ad hoc networks will be an integral part of next generation networks because of its flexibility, infrastructure less nature, ease of maintenance, auto configuration, self administration capabilities, and costs effectiveness. MANETs can operate without fixed infrastructure and can survive rapid changes in the network topology. They can be studied formally as graphs in which the set of edges varies in time. The main method for evaluating the performance of MANETs is simulation. In this paper, an attempt has been made to compare three well know protocols AODV, DSR and TORA by using two performance metrics packet delivery fraction and end to end delay by varying the number of nodes and pause time with identical environment conditions. The comparison has been done by using simulation tool NS2 which is the main simulator, NAM (Network Animator) and excel graph which is used for preparing the graphs from the trace files.</p> <p><b>Keywords:</b> MANET, AODV, DSR, TORA.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Amit N. Thakare, Mrs. M. Y. Joshi, “Performance Analysis of AODV &amp; DSR Routing Protocol in Mobile Ad hoc Networks” IJCA Special Issue on “Mobile Ad-hoc Networks” MANETs 2010, pp. 211-218</li> <li>2. Krishna Gorantala, “Routing Protocols in Mobile Ad-hoc Networks”, Umea University, Sweden, June-2006.</li> <li>3. Geetha Jayakumar and Gopinath Ganapathy, "Performance Comparison of Mobile Ad-hoc Network Routing Protocol", International Journal of Computer Science and Network Security (IJCSNS), VOL.7 No.11, pp.77-84 November 2007.</li> <li>4. Elizabeth M. Royer and Chai-Keong Toh, "A review of current routing protocols for ad hoc mobile wireless networks", Technical report, University of California and Georgia Institute of Technology, USA, 1999,pp.46-55</li> <li>5. Anuj K. Gupta, Dr. Harsh Sadawarti, Dr. Anil K. Verma, “Performance analysis of AODV, DSR &amp; TORA Routing Protocols” IACSIT International Journal of Engineering and Technology Vol.2, No.2, April 2010</li> <li>6. Baruch Awerbuch and Amitabh Mishra, “Dynamic Source Routing (DSR) Protocol”, Johns Hopkins University, US.</li> <li>7. C.Y. Chong and S.P. Kumar, “Sensor Networks: Evolution, Opportunities, and Challenges,” Proc. IEEE, vol. 91, no. 8, pp.1247-1256, Aug. 2003.</li> </ol>	<b>Authors:</b>	<b>Davesh Singh Som, Parma Nand Astya, Ankur garg</b>	<b>Paper Title:</b>	<b>A Comparative Performance Analysis of AODV, DSR and TORA Routing Protocols in MANETs</b>	83-87
<b>Authors:</b>	<b>Davesh Singh Som, Parma Nand Astya, Ankur garg</b>					
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