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1.

Authors: Aniruddha S. Rumale, D. N. Chaudhari

Paper Title: Cloud Computing: Infrastructure as a Service

Abstract: Cloud computing is becoming much popular due to many of its advantages like high performance, distributed computing, high security, pay per use modules etc. . . . Cloud is evolved from simple networking applications. Grid/Cluster/Utility Computing helped formation of basic infrastructure as a service concept. Distributed concurrent and parallel processing with service oriented architecture set a platform for virtualization of resources, making cloud computing possible. This paper talks on the IaaS(Infrastructure as a Service) model of the cloud computing. Authors of this paper, gathered, analysed and drafted all the up to date information on the IaaS. The paper thus discuss in detail the types of infrastructures that can be made available as service with all issues regarding designing and implementing IaaS. Thus the paper can be seen as the IaaS cheat sheet as well as documentation which discusses in brief the historical growth of Information communication technology (ICT) towards cloud computing.

Keywords: Grid, Clusters, Utility Computing, SOA, DCS, IaaS, Cloud Computing, Cloud Computing issues.

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2.

Authors: Deepender Dhull, Swati Dhull

Paper Title: An Improved Ant Colony Otimization (IACO) Based Multicasting in MANET

Abstract: A Mobile Ad hoc Network (MANET) is one of the challenging environments for multicast. Since the associated overhead is more, the existing studies illustrate that tree-based and mesh-based on-demand protocols are not the best choice. The costs of the tree under multiple constraints are reduced by the several algorithms which are based on the Ant Colony Optimization (ACO) approach. The traffic-engineering multicast problem is treated as a single-purpose problem with several constraints with the help of these algorithms. The main disadvantage of this approach is the need of a predefined upper bound that can isolate good trees from the final solution. In order to solve the traffic engineering multicast problem which optimizes many objectives simultaneously this study offers a design on Ant Based Multicast Routing (AMR) algorithm for multicast routing in mobile ad hoc networks. Apart from the existing constraints such as distance, delay and bandwidth, the algorithm calculates one more additional constraint in the cost metric which is the product of average-delay and the maximum depth of the multicast tree. Moreover it also attempts to reduce the combined cost metric. By reducing the number of group members that participate in the construction of the multicast structure and by providing robustness to mobility by performing broadcasts in densely clustered local regions, the proposed protocol achieves packet delivery statistics that are comparable to that with a pure multicast protocol but with significantly lower overheads. By this

protocol we achieve increased Packet Delivery Fraction (PDF) with reduced overhead and routing load. By simulation results, it is clear that our proposed algorithm surpasses all the previous algorithms by developing multicast trees with different sizes.

Keywords: ACO, AMR, APPMULTICAST, MANET.

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3.

Authors:	**Zhenxing Luo**
Paper Title:	**Distributed Estimation and Detection in Wireless Sensor Networks**

Abstract: Distributed estimation and detection are the two most important tasks of wireless sensor networks (WSNs). In the detection task, the fusion center needs to make a decision about the presence of a target. Usually, to make this decision, the fusion center uses a threshold. If the received signal is greater than the threshold, the fusion center considers the target is present. If the received signal is less than the threshold, the fusion center considers the target is absent. In the estimation problem, the fusion center will use a maximum likelihood estimation (MLE) method to estimate target location. In this MLE method, a threshold is needed for sensors to quantize information before sending information to the fusion center. This paper will investigate whether the two thresholds are identical. This problem is practically important because if the two thresholds are identical, the design of WSNs can be simplified.

Keywords: Distributed detection, distributed estimation, K-L distance, wireless sensor networks.

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4.

Authors: **K. Kavitha, K. Selvakumar, T. Nithya, S. Sathyabama**

Paper Title: **Geographic Information Based Protocol Analysis (EGMP)**

Abstract: Mobile Ad-hoc Network (MANET) is a group of wireless nodes that are distributed without relying on any standing network infrastructure. Group communication plays an important role in MANETs. To implement this group communication, we propose an Efficient Geographic Multicast Routing protocol (EGMP) with the help of virtual zone based structure. This EGMP protocol deals with the position information which is used to construct zone structure, multicast tree and multicast packet forwarding. The performance metrics such as Packet Delivery Ratio (PDR), End to End delay and Control Overhead of EGMP are also evaluated through simulations and quantitative analysis by varying number of nodes, zone size and group size. Our simulation result shows that EGMP has high packet delivery ratio, low control overhead and multicast group joining delay under all test scenarios when compared with On-Demand Multicast Routing Protocol (ODMRP) and Scalable Position Based Multicast Routing Protocol (SPBM), and is scalable to group size.

Keywords: MANET, EGMP, SPBM, ODMRP, Zone Structure, Performance metrics.

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5.

Authors: **Yang Xing, Tony Liu, Xiao Chen**

Paper Title: **New ZCW Complete Complementary Code Set and its Analysis**

Abstract: A new complete complementary code set with zero correlation window (ZCW) is constructed and it can be seen as a natural extension of conventional complete complementary code without ZCW. The construction method of this code set is motivated by that of Loose Synchronous (LS) code used in LAS-CDMA system. The main property of the new complementary code set of order 4 is that it can provide twice the number of code as the conventional LS code under the condition of same ZCW. The construction method of the new code set and the proof of the properties are shown in this paper.

Keywords: Zero Correlation Window (ZCW), Complete Complementary Code Set, Loose Synchronous (LS) code.

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Authors:	**Nikhil Sharma, Niharika Mehta**
Paper Title:	**Region Filling and Object Removal by Exempeler Based Image Inpainting**

Abstract: Object removal from images is an image manipulation technique. Objects are removed from digital images and the hole left behind is filled by a graphical technique called inpainting in a visually plausible way. This technique can be applied not only to images consisting of simple textures but also to real life images having complex textures and color scheme. The goal in each case is to produce a modified image in which inpainted region is merged into the image so seamlessly that typical viewer is not aware that any modification has occurred. Applications in image inpainting range from removal of an object from a scene to retouching of a damaged painting or photograph. Removing elements such as stamp dates or unwanted text from a picture. Red-eye removal also is one of the

applications.

6. **Keywords:** Image manipulation technique, graphical technique called inpainting in a visually plausible way. **26-31**

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7.	**Authors:**	**A. M. Bojamma, B. Nithya, Prasad C. N, M. N. Nachappa**
	Paper Title:	**Biometric Security Systems**

Abstract: The modern information technology evolution demands the use of computer networks with strict security performance. The password-based authentication system and the token-based systems that are currently deployed are not able to meet this performance Verification using biometrics has become in the last few years a key issue in security and privacy .The problems of traditional personal authentication systems may be solved by biometric systems. Information security has gained more and more attention from researchers because it plays an important role in our daily life. Biometrics-based authentication offers several advantages over other authentication methods; hence there has been a significant rise in the use of biometrics for user authentication in recent years. It is important that such biometrics-based authentication systems be designed to withstand attacks when employed in critical applications, especially in remote applications which are unattended such as ecommerce environment. In this paper we outline the strengths and weakness of biometrics-based authentication, and techniques to enhance the strength of the biometric system with new solutions for eliminating some of the weak links with techniques like steganography, watermarking, cryptosystems. For illustration purpose, finger print authentication, facial recognition has been considered.

Keywords: Steganography , watermarking, cryptosystem.

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	Authors:	**Rashmi Chandra, Rohit Raja**
	Paper Title:	**An Enhanced Technique for Red-Eye Detection and Correction Using Neural Network**

Abstract: Redeye is a common problem in consumer photography. When a flash is needed to illuminate the scene, the ambient illumination is usually low and a person's pupils will be dilated. Light from the flash can thus reflect off the blood vessels in the person's retina. In this case, it appears red in color and this reddish light is recorded by the camera. Though commercial solutions exist for red-eye correction, all of them require some measure of user intervention. A method is presented to automatically detect and correct red-eye in digital images. The algorithm contains a redeye detection part and a correction part. The detection part is modeled as a feature based object detection problem. Adaboost is used to simultaneously select features and train the classifier. A new feature set is designed to address the orientation-dependency problem associated with the Haar-like features commonly used for object detection design. For each detected redeye, a correction algorithm is applied to do adaptive desaturation and darkening over the redeye region. . The experimental results indicate that, the system can remove the red-eye

automatically and effectively in the digital photo and has good robustness and rapidity.

Keywords: Redeye detection, redeye correction, face detection, image processing, neural network.

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