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S. No			Page No.
1.	**Authors:**	**A.K.M. Al-Shaikhli, Amanoeel Thomas Mika**	
	Paper Title:	**Analysis and Construction of The Multicoil Induction Cookers**	

Abstract: Induction cooker is one of the domestic appliances that enjoins increased demand at the present time, because it has proved its efficiency compared to traditional cookers. Some features of the advantage of the induction cooker are speed in heating and good performance in heat distribution. This paper deals with multicoil induction cookers which can be classified into three types. The first type discuss how to heat any kind of metal loads (magnetic or non-magnetic), while the second type discuss how to increase the diameter of the coil (obtain adaptable – diameter burners formed by concentric planar windings). Finally, the third type discuss the effect of two considerations on the characteristic of the control circuit in the double coil induction cooker, the first is the gap length between the load and heating coil, and the second is the kinds of the load.

Keywords: Induction cooker, multicoil induction cookers, adaptable – diameter burners, gap length between the load and heating coil , kinds of the load.

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2.	**Authors:**	**Alhamzah Taher Mohammed**	
	Paper Title:	**Design and Performance of Frequency Domain Equalization for IEEE 802.11a Physical Layer in SUI Channels**	

Abstract: this research investigates the performance of adaptive equalization processing for Broadband Wireless Access (BWA) is a promising technology which can offer high speed voice, video and data service up to the customer end. Due to the absence of any standard specification, earlier BWA systems were based on proprietary standard. IEEE 802.11a Wireless MAN standard specifies a Medium Access Control (MAC) layer and a set of PHY layers to provide fixed and mobile Broadband Wireless Access (BWA) in broad range of frequencies. The OFDM has adopted in IEEE 802.11a PHY layer for the equipment manufacturer due to its robust performance in multipath environment. The paper investigates the simulation performance of IEEE 802.11a OFDM PHY layer. The overall performance analysis of the proposed equalization technique over Stanford University interim (SUI) channels was performed .The evaluation was done in simulation developed in MATLAB.

Keywords: (BWA), IEEE, BWA, MAN, (MAC), OFDM, PHY, (SUI)

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3.

Authors: **Nguyen Tien Duy, Nghiem Van Tinh, Nguyen Tuan Anh**

Paper Title: **Nonlinear Interpolation in Hedge Algebras Associating Genetic Algorithm to Solve the Bell-Shaped Function Approximation Problems**

Abstract: Recently, there have been many works published related to approximation ability of the function using fuzzy logic and hedge algebras. These results showed that the approximation has a large error. In this paper, we propose a new method in improving the approximation accuracy of the function using hedge algebra by executing the normalization and denormalization by nonlinear interpolation. Moreover, we apply genetic algorithm to optimize the algorithms of hedge algebra. The function we choose to be approximate is the bell-shaped function. It is proved in the result that approximation bell surface has a significant decrease compared with the last results. Therefore, the effectiveness of hedge algebra in solving the approximation problems using algorithm can be revealed; as a result, it is advisable that nonlinear interpolation in hedge algebra to these problems such as nonlinear function approximation, fuzzy control be used,

Keywords: Approximation inference, identification, function approximation, hedge algebras.

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4.

Authors: **Ravikumar.A.G, Manjunath M**

Paper Title: **Investigation on Waste Plastic Fibre Reinforced Concrete using Manufactured Sand as Fine Aggregate**

Abstract: Concrete is the main construction material in the world. It consist of cement, fine aggregate, coarse aggregate and water as main ingredients. Now days due to high global consumption of natural sand, sand deposit are being depleted and causing serious threat to environment as well as society. River sand is becoming a scarce commodity and hence an exploration alternative to it has become imminent. Manufactured sand is the good alternative to river sand and it is purposely made, fine crushed aggregate produced under controlled conditions from a suitable sand source rock. Plastics are non biodegradable common environmental polluting materials. Which are going to affect the fertility of soil. In present study the detailed experimental investigation is carried out on plastic fibre reinforced concrete by partial replacement of normal sand by manufactured sand with different percentages(0%, 20%, 40%, 60%,80%,100%) and adding fixed percentage (0.5% of weight cement)) of plastic fibres.The mechanical properties of concrete like compressive strength, tensile strength and flexural strength are studied here.

Keywords: Fibre reinforced concrete, manufactured sand, compressive strength, split tensile strength, flexural strength

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5.

Authors: **Adrian Titi Pascu, Daniel Băcescu, Constantin Anton Micu**

Paper Title: **Calculation Specifics for The Customized Contact Lenses**

Abstract: This paper presents the theoretical and practical aspects regarding the design and manufacturing of the customized contact lenses based on a proposal for a customized contact lens with a non-circular shape. Are proposed

an oval shape and an approximate trapezoid shape for which arises the idea to calculate a coverage percentage that allows a comparison between the contour shapes of the contact lenses with regard to the direct oxygen transmission degree to the cornea. Another approach regards the possible combinations of surfaces of the customized contact lens, the determination of the curvature radiuses or the equation of the surfaces, while attempting to follow the closest shape to the geometry of the cornea and also the minimization of the aberration of the optical transfer function. Is presented an oval shaped contact lens manufactured in a fast-cast type system during laboratory conditions.

Keywords: Contact lens, customized, elliptical, coverage factor.

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6.

Authors: **Majzoob Kamal Aldein Omer**

Paper Title: **Network Services Application to Controlling and Develop Institute Computer LABs**

Abstract: The research aims to develop a system that helps the use of computer labs devices in the colleges optimal use, through the imposition of a range of settings and restrictions, such as the controlling operations on the devices in the network, by using a series of commands such as closed, and select a specific time to run student education programs, identify the type of software used after checked and validated, enables the administrator to control and restrict the network access to specific destinations and process of controlling the students access to network services such as the Internet, where the management process include blocking non-useful sites which cause a bottleneck in the network, leading to weakness in the efficiency of the network, but sometimes leads to a break, the program determine the specific sites is preventing access to it even increases the efficiency of the network. The System operates on a set of related LAN devices facilitate the take actions settings and services on the devices expeditiously, the system provides settings and restrictions from one central point facilitates the management processing, cause there is a specific central device in the network (server) allows to control network devices from a single location .

Keywords: Computer labs, Network services, student user, administrator user, client services, services administration program

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7.

Authors: **Kushal Dinkar Badgujar, Suneet Singh**

Paper Title: **Numerical Solution of Generalised Burgers-Huxley Equation Using Nodal Integral Method**

Abstract: In this article, a modified nodal integral method (MNIM) is developed to solve generalised Burgers-Huxley equation which is governing equation for various nonlinear wave phenomena. Nodal integral methods have been earlier used for solving differential and partial differential equations in various areas of physics. These methods have been known to be significantly more accurate than traditional finite volume/difference approaches. The developed scheme is verified by comparing it to analytical solutions of the equation for different values of parameters present in this equation. It is observed that MNIM yields quite accurate results even with coarse grids.

Keywords: modified nodal integral method, solve generalised Burgers-Huxley equation, nonlinear wave phenomena. Nodal integral methods.

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8.

Authors: **Abhijeet Chakrey, Priya Pawar**

Paper Title: **Advantages of Mechanical Concrete Road Over Conventional Road**

Abstract: Mechanical Concrete is unicellular confined aggregate unit, it binds aggregates into a singular confinement to support lateral soil pressure, also binds aggregates tighter into a load bearing cell. It basically supports the aggregates used in conventional road, confining it into a single cellular structure. The cellular structure of the mechanical concrete confines the stones used as aggregates. The confinement can be tire derived or any hollow cylindrical confinement, the paper mostly emphasizes on the cost effectiveness of the road also enhancing its strength and durability hence recycled tires are used in Mechanical Concrete Road. Mechanical concrete is a thin walled cylinder of uniform circular shape made up of a single material that is plastic or rubber. The paper consists of the test results and analysis using rubber as a binding cylinder. Mechanical concrete can be manufactured from any suitable material having sufficient tensile and proper size to resist the lateral pressure exerted on it when the aggregates are placed under load. Here the preference is given to any recycled auto or truck tire having its side walls removed. Hence the tire used does not bear the properties of the tire but through manufacturing becomes Tire-Derived cylinder.

Keywords: Confined Aggregates, Conventional road, Reuse of waste tires, tire derived cylinders.

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9.

Authors: **Khandaker Samin Atif, Saurav Barua, Md. Firoz Mahmood**

Paper Title: **An Assessment on Turning Restriction of Vehicle at Intersections in an Arterial Road**

Abstract: Urbanization and population growth accompanied by high travel demand increasing pressure on transportation system and creating traffic congestion. Mega cities with large population cannot cope with high traffic demand due to lack of finance and shortage of adequate land for construction of new roads. However, capacity of existing road can be many folded and performance of the arterials can be augmented through proper traffic management. In this study, we have discussed on a survey study conducted in Mirpur road of Dhaka city—which is one of the busiest arterial there. Grid lock Traffic jam is a common phenomenon and right turning vehicle at intersections worsen the situation. Restricting right turning vehicle in the intersections in lieu of allowing those vehicle to pass through the U-turn in the mid block section can resolve this problem feasibly. CORSIM simulation model is used for Mirpur road (Science Laboratory to Asad Gate). Through the sections of CORSIM simulation model is reviewed, selection of study area and roadway network performance are investigated. An idealistic model for Mirpur road is developed, calibrated and applied to analyze planning options.

Keywords: Traffic Congestion, Simulation, CORSIM, Traffic Management, arterials.

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10.

Authors:	**Abdullah M. Alnajim**
Paper Title:	**A Country Based Model Towards Phishing Detection Enhancement**

Abstract: In this research, a novel country based model to detect phishing attacks is presented. The aim is to enhance the phishing countermeasures applied on a country's Internet infrastructure. This is because of that the anti-phishing framework in Saudi Arabia is exposed to users when they fall to phishing attacks. This paper proposes enhancing anti-phishing behaviors by training them to detect phishing instead of only blocking phishing websites. A prototype proof of concept implementation is discussed and shows the model is exposed to phishing victims who are inside the country deployed it (e.g. Saudi Arabia).

Keywords: Blacklists, Content Filters, Data Service Provider, e-Commerce Security, Network Proxy, Online Banking Security, Phishing , Saudi Arabia.

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11.	**Authors:**	**Supriya Pansare, C. V. Kulkarni**	
	Paper Title:	**Design of Congestion Control Protocol for WMSN**	
	Abstract: A Wireless Multimedia Sensor Network (WMSN) is formed with a large number of distributed embedded devices equipped with camera modules. These devices are able to retrieve multimedia content from the environment and are able to extract video and audio streams, still images as well as the scalar sensor data from the multimedia content. WMSNs have generated much interest in recent years due to their huge applications such as surveillance systems, traffic control systems, environment monitoring, control of manufacturing processes in industry., Multimedia traffic produces busty high-load traffic in the network. Therefore probability of congestion in WMSNs is higher than traditional Wireless Sensor Networks (WSNs). It causes a waste of communication which reduces energy efficiency. In addition, it negatively affects reliability due to the packet losses and degrades overall performance of the network and quality of- service (QoS) of the application. To address this challenge, we propose a novel energy efficient congestion control scheme for sensor networks, called ECODA (Enhanced congestion detection and avoidance)which comprises three mechanisms: 1) Use dual buffer thresholds and weighted buffer difference for congestion detection; 2) Flexible Queue Scheduler for packets scheduling; 3) A bottleneck-node-based source sending rate control scheme. **Keywords:** Wireless Sensor Networks; multimedia; Congestion; QOS **References:** [1] Li Qiang Tao; Feng Qi Yu, "Enhanced Congestion Detection and Avoidance for Multiple Class of Traffic in Sensor Networks", IEEE Transactions, vol.56, issue 3,pp. 1387-1394, Sept. 2010. [2] Y. Sankarasubramaniam, O. Akan, I. Akyildiz, "ESRT: Event-to-Sink Reliable Transport in Wireless Sensor Networks," in Proc. of ACM MobiHoc '03. [3] C.-Y. Wan, S.B. Eisenman, A. T. Campbell, "CODA: Congestion detection and avoidance in sensor networks", in Proc. ACM SenSys ,Nov.2003. [4] I. Akyildiz, W. Su, Y. Sankarasubramaniam, and E.Cayirci , "A survey on sensor networks," IEEE Commu. Mag., vol.40, no. 8, pp. 102-104, Aug. 2002. [5] EBOOK On "WIRELESS SENSOR NETWORKS Technology, Protocols, and Applications " BY KAZEM SOHRABY DANIEL MINOLI TAIEB ZNATI [6] C.-T. Ee R. Bajcsy, "Congestion control and fairness for many-to-one routing in sensor networks", in Proc. ACM Sensys, Nov. 2004. [7] B. Hull, K. Jamieson, H. Balakrishnan, "Mitigating congestion in wireless sensor networks", in Proc, ACM Sensys, Nov. 2004. [8] Scott Pudlewski , TommasoMelodia, "DMRC: Distortion minimizing rate control for Wireless Multimedia Sensor Networks", IEEE Conference, PP . 563-572, 2009. [9] Shahin Mahdizadeh Aghdam, Mohammad Khansari, Hamid R. Rabiee, Mostaf Salehi, "UDDP: A User Datagram Dispatcher Protocol for Wireless Multimedia Sensor Networks", IEEE Conference, PP. 765-770, 2012. [10] Cagatay Sonmez, Sinan Isik, Mehmet Yunus Donmez, Ozlem Durmaz Incel, Cem Ersoy, "SUIT: A Cross Layer Image Transport Protocol with Fuzzy Logic Base Congestion Control for Wireless Multimedia Sensor Networks",2012. [11] Vivek deshpande, Prachi sarode and Sambhaji Sarode "Root cause analysis of Congestion in WSN", International Journal of Computer Applications, Vol. 1 No. 18, pp.27-30, 2010. [12] F.Stann and J. Herdemann, "RMST: Reliable data transport in sensor networks," in Pro. 1st IEEE Workshop SNPA, Anchorage, AK, Nov. 2003, pp. 102-112. [13] P. Jeongyeup, G. Ramesh "RCRT: Rate-Controlled Reliable Transport for Wireless Sensor Networks," in Proc, ACM SenSys, Nov. 2007 [14] S. Rangwala, R. Gummadi, R. Govindan, and K. Psounis, "Interference-Aware Fair Rate Control in Wireless Sensor Networks," In Proc. Of ACM SIGCOMM'06. Page 63-74.	**58-62**
12.	**Authors:**	**Leodivina P. Tagama**	
	Paper Title:	**Hybrid Instruction in Teacher Education Programs of State Universities and Colleges in Region III**	
	Abstract: Higher education is currently in the early stages of a major revolutionary change. Social, economic and technological factors are converging to shape the system of higher education to a new form, one providing a much more flexible form of delivery of instruction. In this time of transition towards digital revolution, hybrid instruction is used. It is any format of instruction which combines dynamically both technology and human instruction. The exemplary formats of hybrid instruction include computed mediated instruction, web-based courseware, distance learning as distribution channel and in-class use of technology as used in teaching professional education subjects enriched the learning opportunities of students and improvement of the instructional delivery as well. The study was conducted to assess hybrid instruction in nine (9) HEIs in Region 3 offering Teacher Education degree programs. The specific problems focused on the photo-tag of the faculty members; distribution of the faculty members to the Professional Education in subjects; extent of utilization of hybrid instruction; extent of attainment of lesson objectives using hybrid instruction as perceived by student respondents; administrative support extended; and problems encountered in the utilization of hybrid instruction. **Keywords:** hybrid instruction, computer mediated instruction, web-based courseware, distance learning, in class – use technology. **References:** 1. Aquino, Federico. (2007). Utilization of Technical Support for Information Technology Among Comprehensive Higher Educational Institutions in Region III. Unpublished Dissertation, Tarlac State University, Tarlac City. 2. Atkinson, Roger. (2000). Multimedia Application. http://www.quasar.ualberta. 3. Belanger, F. (2000). Evaluation and Implementation of Distance Learning:Tachnologies, Tools and Techniques. Herskey, PA: Idea Group Publishing, 2000. 4. Bennet, Frederick. (2000). Computers as Tutors: Solving the Crisis in Education. http://www.crisis.com/faben/summary.html. 5. Berbano, Tomas Benjamin. (2000). Reinvening Instructing in Data Structure, Unpublished Master's Thesis, AMA Computer University, Quezon City, 2000.	**63-67**

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13.

Authors:	**Mili Rosline Mathews, Sreelekha Sreedharan**
Paper Title:	**Detection and Localization of Video Copy-Move Forgery in Temporal and Spatial Domain**

Abstract: Digital videos are widely used and accessed nowadays. Moreover several video editing softwares are also available. Forgeries done within a single video cannot be recognized easily. The signs of forgery are very low in such cases. So the credibility of a video clip in the court as a proof is crucial for legal applications. Different types of video forgeries exist. Copy-move forgery is one of the most common type of video forgery. Our approach is detection and localization of forgery in temporal and spatial domain. The forgeries which can be done within a single video are considered for detection of forgery. For the detection of temporal copy-move forgery the structural similarity between the frames of a video is used. The difference of pixels between adjacent frames is used for identifying the spatially forged region in each frame. We propose an effective system to detect the copy-move forgery in videos.

Keywords: Copy-move forgery, Difference operation, Structural similarity index measure, Video forgery.

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Authors:	**Jagdish Shivhare, B. V. R. Reddy**
Paper Title:	**A High Selectivity and Small Sized Double Fold Microstrip Hairpin Line Bandpass Filter for L-Band RF/Wireless Communication Systems**

Abstract: This technical paper presents a new type of double folded hairpin line microstrip bandpass filter with high selectivity, low cost and 40-50% reduction in size compared to a conventional hairpin line bandpass filter. The filters are not only compact size due to the slow-wave effect, but also have a wider upper stopband resulting from the dispersion effect. These attractive features make the resonator filters hold promise for RF/wireless, mobile communications and other ground and space applications. The design topology has the advantage of desirable narrowband, high selectivity, reasonable return loss, small sized and low cost microstrip filters, make the design more simpler for wider applications in the modern wireless radio communication systems. The expected frequency responses have been simulated by using the Agilent-make ADS and IE3D-Zealand softwares. The measured and simulated results show good agreement.

Keywords: Folded-hairpin line resonator, microstrip filters, slow wave, cross couplings, dielectric constant.

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15.

Authors:	**Remya R. S, Anupama Pradeep**
Paper Title:	**Machine Learning Approach to Detect Tampering in H.264 Video**

Abstract: Now a days there are plenty of software's available to access and edit digital videos. Therefore video tampering detection is crucial for legal, medical and surveillance applications. Digital videos are considered as more reliable source of evidence than still images. The abundance of compressed video forms a potential thread of evidence in court rooms. In case of artifacts and possibility of fraud videos court usually calls forensic investigators for examining the problem of authenticating multimedia content. An automated objective assessment of digital video helps to increase the accuracy of videos. Existing schemes are based on MPEG codec. This paper proposes a novel technique to detect tampering in H.264 videos by using neural network. This paper identifies video tampering by using a feature called sequence of average residual of P-frames (SARP). Then time and frequency domain features of sequence of average residual of P-frames are calculated. The detection system is trained with these features. Then the detection system is applied to the video sequence under examination. This method identifies video tampering by differences in time domain and frequency domain features of tampered video from original video. By using machine learning approach, it classifies type of tampering such as insertion, deletion and copy-move. PNN is used for training. The proposed method is applicable for different codec.

Keywords: video tampering detection, SARP, Time domain feature, Frequency domain feature, Training.

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