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1.	**Authors:** Bahaaeldin Sadagah **Paper Title:** Back Analysis of a Rockfall Event and Remedial Measures along Part of a Mountainous Road, Western Saudi Arabia	1-7

Abstract: Construction of the mountain roads in Saudi Arabia is one of the most difficult tasks. Many problems faced before, during and after construction of the roads. Inhomogeneous rock masses, structural settings, steep slopes, sharp cliffs and geomorphological constraints are the obvious obstacles to safe mountainous roads. Al-Hada mountain road is almost 22 km long shows many incidents of rockfalls. Rainfall took place day before and a week before rockfall. This cause a rockfall of few large blocks to take place, hit a car and break a light lamp. The height of the flying rock is about 12 m above the road level. The RocFall computer program utilized to analyze the event regarding modeling and mitigation. The necessary required rock mass parameters fed to the program. Parameters such as rock blocks size, initiation point, geomorphology and end point are the major factors determining the destructive effect of the rockfall event on the road. Remedial measures recommended according to the modeling process.

Keywords: Al-Hada road, rockfalls, rainfalls, rock slopes.

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	Authors: Gaddafi Bin Ismaili **Paper Title:** Engineering Properties of Fast Growing Indigenous Timber in Sarawak Compare to Acacia Mangium: Aras	

Abstract: An effort has been taken to explore fast-growing indigenous of Aras as optional species besides Acacia mangium that prone to a number of diseases. Basic information on engineering properties viz; mechanical and physical properties from different species, and conditions were acquired from strength property's test namely, modulus of rupture, modulus of elasticity, impact bending, and compression stress parallel to grain. Meanwhile, for physical properties test namely moisture content and density. The test samples were prepared in small clear specimens according to

2.	British Standard, BS373.1957. Specimens condition which is referred to as green condition and air-dry condition. Data obtained from this study is very useful for utilization in furniture and engineering construction industries. In this study Aras was compared to Acacia mangium as the reference point use for observation. The results from the study indicated that, Aras gave the average percentage difference of mean for mechanical and physical property with 35% toward the results obtained by Acacia mangium. **Keywords:** Modulus of rupture, Modulus of elasticity, Impact bending, Compression stress parallel to grain, Moisture content, Density. **References:** 1. Dorthe Jøker, 2000. Acacia mangium Willd, Danida Forest Seed Centre No. 3 Leaflet No. 3, Humlebaek, Denmark. 2. Krishnapillay B. and Abdul Razak Mohd Ali, 1998. Feasibility of Planning High Quality Timber Species in Peninsular Malaysia. In Proceeding of the Seminar on High Value Timber Species for Plantation Establishment-Teak and Mahoganies, 1-2 December 1998, Tawau, Sabah, pp. 91-101. 3. Mohd Hamami Sahri, Zaidon Ashaari Razali Abdul Kaderi and Abdul Latif Mohmod, 1998. Physical And Mechanical Properties of Acacia mangium and Acacia Auriculiformis from Different Provenances PertanikaJ. Trap. Agric. Sci. 21(2): 73 - 81 (1998) 4. Panshin, A.J. and De Zeeuw, C, 1980. Textbook of Wood Technology, Mcgraw-Hill, New York. 5. Krishnapillay, D.B., 1998, Case Study of The Tropical Forest Plantations In Malaysia, Forest Plantations Working Papers, Forestry Department, Food and Agriculture Organization of the United Nations. 6. British Standard, 1957. Methods of Testing Small Clear Specimen of Timber. British Standard Institution. BS 373: 1957, pp. 31. 7. Sven Thelandersson and Hans J. Larsen, 2003. Timber Engineering. John Wiley and Sons Ltd, West Sussex, England, pp. 30. 8. Keith R. Bootle, 1985, Wood in Australia: Type, properties and uses. McGraw-Hill Book Co. Australia. 29, pp. 60-61. 9. Alik Duju, 1999, Strength Properties of Acacia mangium Grown in Sarawak. TRTTC/STA, Forest Products Seminar, 12-14 October 1999, Kuching, Sarawak, Malaysia, pp.160. 10. Walker, J.C.F., 1993. Primary Wood Processing: Principles and Practice, 1st Edition. Chapman & Hall, London, pp. 72, 323, 346, 353, 362.	**8-12**
3.	**Authors:**	**Asri Laksmi Riani, Hunik Sri Runing Sawitri**
	Paper Title:	**Problems and Prospects of Entrepreneurship on Learning Management in Batik Industry**
	Abstract: The purpose of this study is to determine: 1. Benefits of workplace training programs, 2. Issues that affect participation in training, 3. A motivator in doing business, 4. The factors that affect business activities development, 5. The importance of learning methods to develop qualified entrepreneurship. This research was conducted on the batik entrepreneurs in Surakarta, Karanganyar, and Sragen. The sampling method is non-probability sampling, with convenience sampling technique on 65 respondents. The results of this study indicate that there are tendencies that: 1. Majority of respondents will apply to learning outcomes about entrepreneurial skills in the workplace. 2. Majority of respondents want to participate actively in the training. 3. Majority of respondents feel that they get more enlightenment in the training. 4. Factors that affect business activities development, the majority of respondents feel that they see the availability of labor, raw materials, and capital. 5. In terms of teaching methods to develop qualified entrepreneurship, most respondents respectively stated that they prioritize some methods such as: case studies, role plays, business games, counseling, and lectures / discussions. **Keywords:** Business motivator, learning methods, participation, training program. **References:** 1. Fayolle (2006) Fayolle, A., Gailly, B., and Lassas-Clerc, N. (2006). Assessing the impact of entrepreneurship education programmes: a new methodology. Journal of European Industrial Training Vol. 30 No. 9, 2006, pp. 701-720. 2. Mwasalwiba, (2010) "Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators", Education + Training, Vol. 52 Iss: 1, pp.20 - 47 3. Cruz, N.M., Escudero, A.I.L., dan Leitao, F.S. (2009). The effect of entrepreneurship education programmes on satisfaction with innovation behaviour and performance. Journal of European Industrial Training. Vol. 33 No. 3, 2009, pp. 198-214. 4. Popadiuk, Silvio, &Choo, Chun Wei (2006). "Innovation and knowledge creation: How are these concepts related?". International Journal of Information Management. Vol. 26. Pp. 302–312. 5. Wang, C. L. and Ahmed, P. K. (2004). The development and validation of the organisational innovativeness construct using confirmatory factor analysis. European Journal of Innovation Management, 7(4):303-313. 6. Ireland and Webb (2007) Journal of Management, Vol. 33 No. 6, December 2007 891-927 7. Lumpkin, Dess.1996. Clarifying the Entrepreneurial Orientation Construct & Linking It to Performance. The Academy of Management Review. Vol.21, No.1, pp.135-172.	**13-16**
	Authors:	**Uppe Nanaji, V. V. R. L. Sastry**
	Paper Title:	**Scope of Proposed Internet**
	Abstract: The Internet is the most important information exchange means nowadays. It has become the core communication environment, not only for business relations, but also for social and human interaction. Yet, the immense success of Internet has created even higher hopes and expectations for new immersive and real-time applications and services, without guarantees that the Internet as we know it today will be able to support them. The EC Future Internet Architecture (FIArch) group has already identified some of the fundamental limitations of current Internet architecture and some of the Design Objectives of the Future Internet [FIArch]. This is the next step, which contributes towards the	

4.	specification of the Design Principles that will govern the Internet architecture. **Keywords:** Business relations, human interaction, immersive, FLArch, Design Objectives, Design Principles. **References:** 1. L.J.Fogel, A.J.Owens, and M.J.Walsh, Artificial Intelligence through Simulated Evolution, John Wiley, 1966. 2. W.Heisenberg, Über den anschulichen Inhalt der quantentheoretischen Kinematik und Mechanik, Zeitschrift für Physik, vol..43, no.3-4, pp.172-198, 1927. 3. J.H.Saltzer,, D.P.Reed, D.D.Clark, End-To-End Arguments in System Design, ACM Transactions on Computer Systems (TOCS), vol 2, no.4, November 1984, pp 277-288. 4. W.Stevens, G.Myers, L.Constantine, Structured Design, IBM Systems Journal, vol.13, no.2, pp.115-139, 1974. 5. "The End-End Principle and the Definition of Internet" Preparatory Process: Working Group on Internet Governance (WGIG), Contribution of Corporation for National Research Initiatives, Prepared by: Patrice A. Lyons (November 10, 2004).	**17-20**
5.	**Authors:** **Ahmad Khan, Jallat Khan, Maria Zafar, Muhammad Irfan, Imran Rabbani** **Paper Title:** **Formulation Development and Optimization of Intermediate Release Metoclopramide HCl Tablets by Central Composite Rotatable Design for IVIVC Studies** **Abstract:** The objective of this study was development and optimization of intermediate release formulation for IVIVC study of metoclopramide HCl. A four steps simple and cost effective study was performed. The first step was to study the micromeritic properties of different powder blends with and without metoclopramide HCl (Placebo). In second and third step, central composite design (CCRD) was used for intermediate release metoclopramide tablets. In the last step stability studies of three selected metoclopramide HCl tablet formulations which were calculated using R Gui software. Varying concentrations of excipients, HPMC K4M cps, Avicel PH-102, and lactose DC were used as variables in CCRD. Preformulation studies of two blended powders i.e. placebo and metoclopramide HCl were done to evaluate the angle of repose, loose bulk density, tapped bulk density, and compressibility index. Blending rate constant was performed at different mixing times i.e. 5, 7, 12, and 15 minutes. Out of twenty intermediate release formulations, three (F1, F7, F10) were subjected to direct compression on the basis of compressibility index. Physicochemical properties and in-vitro kinetic studies in different dissolution media were measured successfully. Simple experimental studies were performed to determine relative densities, tensile strength of tablets, hardness, weight variation, friability, disintegration and dissolution of tablets. Presence of metoclopramide HCl in the powder blend enhanced all the micromeritics properties. 12 minutes was found to be the best mixing time. The increase in relative density resulted in increase in hardness of tablets containing metoclopramide HCl. The analysis of release pattern was done using model dependent kinetic approaches i.e. zero order kinetics, first order kinetics, Hixon Crowell, Higuchi kinetics, Korsmeyer and pappas, Baker and Lonsdale model, Weibull model, Hopfenberg model and peppas Sahlin model; and model independent kinetic models using f1 and f2 values. F10 showed the best result in stability studies having shelf life of 64 months calculated by RGui. **Keywords:** Metoclopramide HCl, Intermediate release, stability studies, central composite design, model dependent and model independent kinetic models. **References:** 1. WHO Model List of EssentialMedicines: World Health Organization. October 2013. Retrieved 22 April 2014. 2. Bartholow M: Top 200 Drugs of 2012. Pharmacy Times, 22 April 2014. 3. Ryshkewitch E: Compression strength of porous sintered alumina and zirconia, communication to ceramography. J .Am. Ceram. Soc. 1953, 36: 65-68. 4. 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6.

Authors: **D. V. Biradar, Praful P. Maktedar**

Paper Title: **Investigation of Energy Consumption MANET**

Abstract: In Mobile Ad hoc network (MANET) numerous mobile sensor nodes are indiscriminately situated in given system. The working of MANET is based upon collaboration of all nodes for promoting data packets and consistent route detection. A selfish node is a node who does not forward data packets to other nodes. Instead it reserves its resources and energy. Selfish node detection and elimination is an important concern issue. Energy is one of the significant qualities of service constraint in MANET. In this paper, we think about a range of means of growing reliability of system with less energy usage. Here by altering packet size, we evaluate packet Delivery Ratio, Packet loss Ratio as well as throughput, control overheads and Energy Consumption of a system.

Keywords: Wireless Sensor Network; Reliability; Reporting rate, Packet Delivery ratio; Energy.

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7.

Authors: **Keshavamurthy, Dharmishtan K. Varughese**

Paper Title: **Remote Lab Circuit Temperature and Intensity Measurement and Control**

Abstract: Data acquisition systems are primarily systems which receive the analog data, perform and process the predefined response. Data acquisition (DAQ) is to obtain the data that can be manipulated by a PC, data acquisition, mainly involves getting analog signals, waveforms and processing them to obtain required information. The main electronic device of DAQ systems includes sensors which converts any parameter to an electrical in nature, then processing the signal and send to the by a DAQ hardware.These papers discuss two real signals, particularly light intensity and temperature and transmit this information through wireless to a facility that has better human processing and accessibility capability. The application of this paper is in places where analog values of the surroundings have to be remotely received, monitored and controlled.

Keywords: DAQ, hyper terminal, wireless technology, sensor and Real time display.

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8.

Authors: **Eglantina Kalluci, Fatmir Hoxha**

Paper Title: **Accelerated Multipoint Root Finding Iterative Methods**

Abstract: Root finding is one of the most significant problems not only of applied mathematics, but also of engineering sciences, physics, finance etc. The implementation of efficient numerical methods to build-in functions in different software programs is a task we want to achieve. We possess different groups of methods with sufficiently good convergence order, but as we know the higher the speed is a larger amount of function and derivative evaluations per iteration is needed. In this paper we will present new multipoint methods with higher computational efficiency, than known ones. The comparison will be made by defining the computational efficiency based on the convergence order, and the efficiency index, which measures the cost of performing iteration.

Keywords: Efficiency index, iterative method, order of convergence, root finding.

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9.

Authors: **Premila S, T. Gunasekaran**

Paper Title: **A Review on Adder Design using QCA Systolic Array**

Abstract: Quantum-dot cellular automata (QCA) are considered as an advanced technology compared to complimentary metal-oxide-semiconductor (CMOS) due to QCA's merits. Many logical circuits are designed using QCA which consume low power and reduced area. Therefore our interest is on designing of adders using QCA. Thus we design adders and detailed simulation using QCAD designer is presented. The performance of proposed adder gives the better Delay performance compared to Ripple carry adder (RCA).

Keywords: Quantum-dot Cellular Automata, systolic array, matrix multiplier, Galois Field multiplier, coplanar crossing, multilayer crossover.

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Authors: **Bhagyashree Anil Dere, Sheetal Bhujade**

Paper Title: **An Efficient Spectrum Decision Making Framework for Cognitive Radio Networks**

Abstract: This review paper is based on the spectrum decision framework for cognitive radio networks. Cognitive radio networks have been proposed as a solution to both spectrum inefficiency and spectrum scarcity problems. However, they face to a unique challenge based on the fluctuating nature of heterogeneous spectrum bands as well as the diverse service requirements of various applications. In this paper, a spectrum decision framework is proposed to determine a set of spectrum bands by considering the application requirements as well as the dynamic nature of spectrum bands. To this end, first, each spectrum is characterized by jointly considering primary user activity and spectrum sensing operations. Based on this, a minimum variance based spectrum decision is proposed for real-time applications, which minimizes the capacity variance of the decided spectrum bands subject to the capacity constraints. For best-effort applications, a maximum capacity-based spectrum decision is proposed where spectrum bands are decided to maximize the total network capacity.

Keywords: Spectrum decision framework, cognitive radio networks, spectrum scarcity, network capacity.

10.

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11.

Authors: **D. Madhusudana Rao, G. Srinivasa Rao**

Paper Title: **Structure of Certain Ideals in Ternary Semirings**

Abstract: In this paper we studied about principal ternary ideals, simple ternary ideals and semisimple ternary ideals in ternary semirings. Mathematics Subject Classification: 16Y30, 16Y99.

Keywords: Left simple, lateral simple, right simple, simple, duo ternary semiring, semisimple ternary semiring, globally idempotent.

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49-56

Authors: **Rushikesh T. Bankar, Suresh S. Salankar**

Paper Title: **Implementation of an Intelligent Head Gesture Recognition System**

Abstract: As per the rapidly advancement in the changing technology, the numerous applications are required. For example, for face, hand and gesture recognition. The previous researchers have been developed various methods foe head gesture recognition and they presented various limitations. Therefore the paper proposes an FPGA based gesture recognition system. The gesture detection and

gesture recognition can achieve 30 frames per second using FPGA system. Accordingly that the system software can subsequently schedule all the tasks during the processing. The proposed system also introduces the obstacle detection technique. The system uses ultrasonic sensors for the obstacle detection. The proposed system is responsible for the detection of obstacles.

Keywords: Wheelchair Interface, Ultrasonic Sensors, Face Detection, Gesture Recognition.

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Authors:	**Shraddha V. Manikpure, Rushikesh T. Bankar, Suresh S. Salankar**
Paper Title:	**A Review on Robo Chair Assistance using Head Gesture Recognition**

Abstract: Face detection is a computer technology that determines the location & size of human faces in digital images. Thus by determining the head gesture of person sitting on robo chair the controlling of the chair can be done by the improved Adaboost algorithm. The recognized gestures are used to generate motion control commands to the low-level DSP motion controller so that it can control the motion of the Robo Chair according to the user's need. Looking for something, when the commands for the movement are generating must be considered unnecessary movement, thus to avoid this, Head gesture interface focused on the central position of a person sitting on robo chair & identify only the useful head gesture. This paper determines, the improved Adaboost algorithm used for face detection is to increase the output results for the system, effectiveness of the system & efficiency on which the system implements. The concept of Obstacle detection is also used for the enhancement of the system, it is done by using ultra sonic sensors.

Keywords: Face Recognition, Head Gestures, Face Tracking, Obstacle Avoidance.

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14.

Authors: **Tilottama Dhake, Pratik Gala, Keval Jain, Bhavesh Mayekar, Priyal Shah**

Paper Title: **Comparison Between WiMAX and LTE Based on System Level Simulation using NS2**

Abstract: The increasing use of wireless devices and in particular smart phones has resulted the need for greater capacity and higher speed than the existing network technologies. Hence, LTE (Long Term Evolution) and WiMAX (Worldwide Interoperability for Microwave Access) became the two leading technologies considered for adoption to fulfill this need. The industry landscape in telecommunications is changing rapidly at the moment. Services are increasingly shifting from voice to data and from circuit-switched to packet-switched ones. Battle between LTE and WiMAX technologies is already heating up with WiMAX being ahead due to availability of standards through IEEE 802.16 and is up and running but lacks in substantial roll out plans due to cost. On the contrary, LTE upgrades from 3G networks are rumored to be as simple as slotting in a new card in the rack. LTE has gained far greater support and adoption in the industry thus leaving WiMAX future prospects limited

Keywords: LTE (Long Term Evolution), WiMAX (Worldwide Interoperability for Microwave Access), Technologies.

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15.

Authors: **Prabha R, Krishnaveni M, Manjula S. H, K. R. Venugopal, L. M. Patnaik**

Paper Title: **TAEER: Trust Aware Energy Efficient Routing Frame Work for Wireless Sensor Networks**

Abstract: Wireless Sensor Networks are basically employed for critical tasks whose operation is of prime importance.The sensor nodes are deployed in an environment where human intervention is not possible most of the times. The deployment of sensor nodes in habitat monitoring, health care, military fields demands that security to be in place because the data being handled is highly confidential. Wireless sensor networks are vulnerableto a wide set of attacks which threaten the network operation. The routing procedure employed inwireless sensor networks must becapable of preventing the data integrity loss that results out of the both active and passive attacks. In addition to the network being secure, trust establishment atvarious points at which the data is transmitted and energy awareness is essential tohave high network lifetime. Networks are highly constrained in resources such as memory, processing capabilities and energy. This resourceconstraint is a rigid obstacle against applying traditional security mechanism like cryptographic solutions which need too much processing power and thus leading to heavy energy consumption. The limited energy resources on sensor nodes makethem an attractive target for the attackers. Our proposed protocol caters to include trustworthiness and energy awareness by including a trust model thatincludesboth directand indirecttrusts.The proposed protocol safeguards a wireless sensor network from intruders by considering the trustworthiness of the forwarder node at every stage of multi-hop routing. Increasesnetwork lifetime by considering the energy level of the node, preventstheadversaryfrom tracing the route from source to destination by providing path variation. The protocolis built on NS2 Simulator. Experimental results show that the protocol provides energy balance through establishment of trustworthy paths from the sourceto thedestination.

Keywords: Energy Awareness, Routing, Security, Trust Model, Wireless Sensor Network.

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16.

Authors: **Sheikh Jaber Nurani, Chandan Kumar Saha, M. N Haque**

Paper Title: **Mechanical Properties and Wear Strengths of Piston Alloy-Alumina Composites**

Abstract: Aluminium metal matrix composites reinforced with alumina particles have better mechanical and tribological properties than aluminium alloys. For this reasons these composites are widely used in aerospace and automobile industries. In this work Scrap piston alloy was used as master alloy because it contains silicon and magnesium. Silicon increases the casting ability and magnesium increases the wettability of alumina particles in master alloy. The desired composites were produced by the stir casting method by adding 5%, 10% and 15% alumina particles in master alloy respectively. For each composite alumina particles were preheated to a temperature of 800°C for 2 hours. Then particles were added gradually into the molten master alloy for achieving improved wettability and uniform distribution. The stirring was continued for 5 minutes. Finally composites ware poured into permanent metallic moulds at a temperature of 650°C. The tensile strength and hardness of the composites were examined. All composites have higher strength than master alloy. Addition of alumina particles in master alloy increases the hardness of the composites. The wear tests were conducted using pin on disc wear testing machine with counter surface as steel disc of hardness HRC 32 and surface roughness of 0.62 µm. The composite pin was used as specimens and all the wear tests were carried out in air and dry sliding conditions. It was found that composites have superior wear resistance property over master alloy. It was also examined the effect of load, sliding speed and sliding distance on wear behaviour. All these three factors increase the wear loss. Microstructural characterization of the composites has performed.

Keywords: Composite, piston alloy, alumina particles, stir casting, tensile strength, hardness and wear properties.

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17.

Authors: **Bhushan P. Ragit, Arti V. Bhingare, Rushikesh T. Bankar**

Paper Title: **An Intelligent Fruit Counting System**

Abstract: In this paper image processing based yield counting system and health monitoring of citrus fruit is being processed. The model which is explained in the paper can be worked in any graphical area. The system consists of an automatic robot which revolves around. The axis of citrus tree and clicks various images from different angle. Then this images are processed by image processing algorithm and color based counting of fruit is presented at the output. The system is being designed to automatically and accurately calculated the yield of citrus group tree and health monitoring is temperature and moisture of tree is also include in system.

Keywords: Digital Signal Processing, Signal Processing, Data Equalization, Embedded Technology,

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Image Processing, Robotics, WSN.

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