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S. No			Page No.
1.	**Authors:**	**Lerdlekha Sriratana, Sawatdee Poochong, Kridsda Bisalyaputra**	
	Paper Title:	**A Study on Thailand Solar Energy Business Opportunity in Very Small Power Producer (VSPP) Sector Contributed by Feed-in Tariff**	
	Abstract: In recent Thailand energy business, solar power plants have high potential due to a clean and renewable energy of solar power. However, the information about solar energy business opportunity is also essential for private sector investment. Since 2013, Feed-in Tariff (FiT) has been announced to replace the Adder measure that also results in the difference of electricity cost structures. This study presents the review of solar energy business opportunity contributed by FiT focusing on Very Small Power Producer (VSPP) sector. The analysis of Adder and FiT measures in terms of business promotion was performed. Also, an 8 MW VSPP solar farm project was selected as a case study for investment analysis contributed by FiT. From analysis, it can be noted that the benefit from electricity purchase rate contributed by FiT would be lower than that of the Adder due to the high costs of PV system recently which is also included in the initial investment. However, if the technology and other related costs of PV system decrease, the solar power projects subsidized by the FiT would be more worthwhile for investment in the future.		**1-4**
	Keywords: Solar Energy, Policy, Subsidy, Measure, Investment		
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2.	**Authors:**	**M. Shoukath Ali, R. P. Singh**	
	Paper Title:	**A Study on Game Theory Approaches for Wireless Sensor Networks**	
	Abstract: Game Theory approaches and their application in improving the performance of Wireless sensor networks (WSNs) are discussed in this paper. The mathematical modeling and analysis of WSNs may have low success rate due to the complexity of topology, modeling, link quality and etc, however Game Theory is a field, which can efficiently used to analyze the WSNs. Game theory is related to applied mathematics that describes and analyzes interactive decision situations. Game theory has the ability to model independent, individual decision makers whose actions affect the surrounding decision makers. The outcome of Complex interactions among rational entities can be predicted by a set of analytical tools, however the rationality demands a stringent observance to a strategy based on measured of perceived results. Researchers are adopting game theory approaches to model and analyze leading wireless communication networking issues, which includes QoS, power control, resource sharing and etc.		**5-7**
	Keywords: Wireless sensor network; Game Theory; Cooperative game theory; Non-cooperative game theory; Wireless communications.		
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3.	**Authors:**	**Ahammad Vazim K. A., Jesin T. A., Anil Raj B., Midhun A. R., Sreekutten K.**	
	Paper Title:	**Design and Fabrication of a Novel Low Cost Food Waste Composting System with Accelerating Process Technology**	
	Abstract: Waste disposal is one of the biggest problems faced by the most countries. Unless and otherwise a proper methodology is met to treat the domestic and industrial effluents the public health and environment will face serious problems. Our project finds its application in the safe treatment of food waste aerobically with the help of mechanical agitation to reduce the risk of contamination in our households. Composting can be defined as the biological decomposition of organic matter under controlled, aerobic conditions into a stable product that may be used to improve soil quality or as a potting medium. Composting also disinfects organic wastes so that they may be beneficially used in a safe matter. The purpose of the project was to design and fabricate a low cost food waste		**8-11**

composting system which ultimately accelerate the composting process. Experimentally it was found that the composting of normal vegetable residues take about 60 days with the help of a bacterial composter, like any biochemical reaction time duration required for the completion of composting was contributed by many factors which includes particle size, water content, temperature, air circulation. The device fabricated was fully functional in controlling the major factors among the above stated and can accelerate the overall process by 50%.

Keywords: food waste, composting system, accelerating process technology

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4. M. de Bertoldi, G. Vallini and A. Pera, Notes, International Solid Waste Management Association.

Authors:	**Amiya Ranjan Malik, Bibhuti Bhusan Pani, Sushant Kumar Badjena**	
Paper Title:	**Powder Metallurgy Processed Ferrous Composites: A Review**	

4.

Abstract: This paper reviews processing and synthesis of particulate reinforced ferrous based Metal Matrix Composites (MMC) and Nanocomposites through Powder Metallurgy (P/M) method. By this route it is possible to manufacture MMCs with wide range of compositions and density. As a result there is improvement of wear resistance, abrasion resistance, corrosion resistance, mechanical properties and high temperature friction properties. The reinforcing particles commonly adopted were carbides, oxides, borides, nitrides, carbonitrides, complex carbides, intermetallics, synthetic materials etc. Apart from this it also reviews how several factors affect properties of MMCs.

Keywords: Ferrous Matrix Composites, Nanocomposites, Particle reinforcement, Powder Metallurgy.

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5.	**Authors:**	**Ashok R Mundhada, Arun D Pofale**
	Paper Title:	**Concrete's Odyssey Through Heat: A Review**

Abstract: Fire is a catastrophic event to which any building can fall victim during its lifetime. Not only does it pose a direct threat to the occupants through the release of harmful gases and devastating heat, but the elevated temperatures themselves also have seriously adverse effects on the structural integrity of entire building. Though undesired, fire is an exigency that cannot be avoided altogether. Therefore, impact of fire on concrete/ RCC deserves minute scrutiny. In this study, a review is carried out based on the experimental studies on the performance of concrete/RCC when exposed to FIRE/ higher temperatures. The compiled test data revealed distinct difference in mechanical properties of normal, high strength, self compacting & improvised concrete. Shape & size of specimens, concrete grade, admixtures, temperature level, applied load, exposure time to heat, rate of heating, rate of cooling, specimen type (stressed/unstressed member), type of cooling etc were the parameters that influenced the test results. Exposure time, exposure temperature & concrete cover were observed to be the principal factors. The outcome of the review helped in identifying the main problem areas, dubious claims & gaps/ lacunae in the research works.

Keywords: Concrete, Fire, RCC, Spalling

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6.	**Authors:**	**Neha Chouhan, Rohit Gupta**	
	Paper Title:	**Experimental Investigation for Tool Life by Optimizing Cutting Parameters in Plain Turning Operation by Statistical Methods**	
	Abstract: Rate of production and tool material cost plays a significant role other than the material cost of the part to be made in a production run from economic point of view. The maximum production rate can be achieved if the total time required per piece is reduced to a minimum [1]. The paper presents an optimization technique to achieve minimum tool wear which would lead to reduced tool changing time and tooling cost. The experimental layout is designed based on the Taguchi`s L9 orthogonal array technique and analysis of variance (ANOVA) is performed to identify the effect of the cutting parameters on the response variables. Two different set of response variables are used, first, variation of cutting speed with feed and depth of cut, second, variation of rake angle with feed and depth of cut. The calculation is performed using Minitab-17 software. **Keywords:** Optimization Technique, Taguchi`s L9 orthogonal array, analysis of variance (ANOVA), Minitab-17 **References:** 1. A.Ghosh, A K Mallik, Manufacturing Science 2. https://www.ee.iitb.ac.in/~apte/CV_PRA_TAGUCHI_L9MAN.htm 3. S. R. Das, R. P. Nayak, & D. Dhupal, "Optimization of the cutting parameters on tool wear and workpiece surface temperature in turning of AISI D2 steel", International Journal of Lean Thinking, 2012. 4. K Dhameliya, J Desai, M Gandhi, D Dave, "Experimental investigation of process parameters on MRR and Surface roughness in turning operation on CNC Lathe machine for Mild Steel – E250: IS 2062" 5. Gunay M., Korkut I., Aslan E. and Eker U., Experimental investigation of the effect of cutting tool rake angle on main cutting force, Journal of materials processing technology,166, pp 44-49, 2005	**34-39**
7.	**Authors:**	**Muhammad Abdus Samad**	
	Paper Title:	**Ergonomics and the Prevention of Musculoskeletal Strain and Back Injuries**	
	Abstract: As technology becomes more complex, so ergonomics is undoubtedly destined to play an increasingly important role in industrial production and industrial health and safety. At the workplace, ergonomics places equal emphasis upon greater system efficiency and improved health of the individual. Ergonomics must be involved in fitting the tool and machine to the worker by design, fitting the worker to the machine by selection and training, and the optimization of the ambient environment to suit the man or the adaptation of the man to tough environmental conditions. Ergonomics aims to promote efficiency, safety and comfort at work situation in industry through better relationship between man, his tools and the work environment. This paper deals about the injuries such as backaches, neck aches, and other muscular strains due to bad seating and incorrect working posture and how to prevent them by designing of workstation that will be very comfortable and convenient to work at. This paper also discusses the optimal conditions for the workers, reduction of physical workload, improvement of working postures and facilitating psycho-sensorial functions in instrument handling, and so on. **Keywords:** Back injury, Workstation design, Human factor, Productivity and Anthropometry. **References:** 1. Helander, Martin (1943). A Guide to the Ergonomics of Manufacturing. 2. Kroemer, K. (1994). Egonomics: How to Design for Ease and Efficiency. Englewood Cliffs,NJ: Prentice Hall 3. Eklund, J. (1997). Ergonomics, quality and continuous improvement— conceptual and empirical relationships in an industrial context, Ergonomics, Vol. 40, 982–1001 4. Bunning, T. (1998). Designing ergonomically sound assembly workstations, Occupational Hazards, Vol. 60, No. 8, 63–65 5. Bullinger, H. J. (1986). Systematische montageplanung , Hanser, Munich (in German) 6. Pheasant, S. and Haslegrave, C.M. (2005). Bodyspace: Anthropometry, Ergonomics and the Design of Work. Taylory & Francis group, LLC.	**40-43**
8.	**Authors:**	**Pakinam Ashraf, Hany Ayad, Dina Saadallah**	
	Paper Title:	**Sense of Community and Built Environment: How Can Built Environment, Social Economic Conditions and History of Place Shape Our Sense of Community?**	
	Abstract: Sense of community is a concept in community and social psychology and has been investigated in several researches. The sense of community level changes towards many independent variables and it is related to the quality of the built form. This research aims at investigating the relationship between the sense of community and some determinants such as; the physical environment, the historical background and the socio economic conditions in selected neighborhoods. Furthermore, this research examines the social interaction as it has an important role in measuring the sense of community. To achieve that, the authors propose a methodology composed mainly of two major tools; the first, a survey formed of sense of community indices, as well as other social and psychological factors according to Kim and Kaplan theory. The second tool is based on the observation of physical attributes of the neighborhood. The adopted methodology is applied on two neighborhoods in Alexandria city, Egypt. By analyzing the survey results and the researcher's observation of physical attributes in the selected neighborhood, it was found that there is a strong correlation between the sense of community and several independent variables such as the built environment, the socio economic conditions, some demographic factors like age, monthly income, length of residence and the importance of pedestrian factors on measuring sense of community. **Keywords:** Sense of community, Built environment, Statistical analysis, Social Interaction, Alexandria neighborhoods. **References:** 1. Abdo, M. M., 2013. The "Open Cities" Approach: A Prospect for Improving the Quality of Life in the City of Alexandria, Egypt, Alexandria,	**44-55**

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Authors:	**Sarah M. Sabry, Hany M. Ayad, Dina M. Saadallah**
Paper Title:	**Assessing the Factors Associated with Urban Mobility Behaviour: Case studies from Alexandrian Neighborhoods, Egypt**

Abstract: With the rapid spread of urbanization, cities started to witness challenges related to its streets. It is becoming imperative that the mobility should be managed appropriately to minimize its negative impacts on urban areas. Unfortunately, city leaders in many developing countries like Egypt are following the same Car-Oriented development patterns made by cities in developed countries. Ironically, the developed countries are trying to recover from a car dominated development era by re-allocating road space for public and non-motorized transport. In this respect, this research aims at exploring the key aspects and factors that affect individuals' mobility choices in Egypt. It focuses on the socio-demographic, attitudinal and physical factors that are associated with commuters' mobility behaviour and their choice of mode for daily trips. Two neighborhoods in Alexandria are selected for comparative and analytical analyses. First, a survey is carried out in the two selected areas. Second, Pearson's Chi-square $\chi 2$ test is performed to explore the significant differences of commuter's attitudinal, personal and built environment factors between the two areas. Finally, cross-tabulation distribution of categorical variables are presented in terms of absolute frequencies, p-values from Pearson's Chi-square $\chi 2$ test and t-test so as to look for the association of the urban form and non-urban form factors to mobility choices.

Keywords: Sustainable Urban Mobility (SUM) – Travel Behaviour - Mode choice –Non-urban form factors – Built environment factors – TOD development – Sustainable neighborhoods.

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10.

Authors: **Nor Azlina Abd Rahman, Vinothini Kasinathan, Rajasvaran Logeswaran, Nurwahida Faradila Taharim**

Paper Title: **QR IT Seek: A Conceptual Model for Teaching and Learning by Digital Natives via Edutainment Game**

Abstract: The goal of teaching and learning activities is to for the target recipient to achieve the learning outcomes. As the Digital Natives generation is being brought up in a much more sophisticated technologically advanced world, the aptitude and requirements in their studies have changed. More interactive and fun learning, out of the classroom setting, is desired. This paper proposes a conceptual framework for edutainment and reports on a primary study on a developed QR IT Seek game. The primary study, results and analysis would aid in further improvements and adaptation of such activities to improve the teaching and learning performance of the Digital Natives.

Keywords: edutainment, QR-Code, QR IT Seek competition, Digital Natives, pedagogy.

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11.

Authors: **B. M. Mustapha, V. C. Ikpo, A. B. Bababe**

Paper Title: **Intelligent Control for Laboratory DC Motor**

Abstract: This paper presents the design of a fuzzy PD controller for laboratory DC motor (MS 150 Kit) to minimize the tracking error in applications. The Fuzzy PD controller was simulated and the responses obtained when compared with a conventional PD controller revealed better performance.

Keywords: Control, Direct-Current, Fuzzy, Motor

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12.	**Authors:**	**Sanjay S. Bhagwat, S. D. Pohekar**	
	Paper Title:	**Performance Assessment of CHP Cycle in Sugar Industry**	
	Abstract: A huge potential for power generation from waste fuels exists within the sugar cane industry. This paper presents the findings of the energy and exergy analysis of cogeneration i.e. CHP cycle in sugar industry. The study was aimed at assessing the operational performance of the bagasse based cogeneration power plant in sugar industry by evaluating both the energy and exergy efficiency. **Keywords:** Energy, Exergy, Entropy, CHP. **References:** 1. A.Cihan, O.Hacıhafızoglu, & K. Kahveci,, "Energy–exergy analysis and modernization suggestions for a combined-cycle power plant" International Journal of Energy Research, 30(2), 2006,pp.115-126. 2. M.Ameri, P. Ahmadi & A.Hamidi, "Energy, exergy and exergoeconomic analysis of a steam power plant: A case study", International Journal of Energy Research, 33(5), 2009, pp. 499-512. 3. O.Can, N. Celik and I. Dagtekin, "Energetic–exergetic-economic analyses of a cogeneration thermic power plant in Turkey", International Communications in Heat and Mass Transfer, 36(10),2009, pp. 1044-1049. 4. F.Jurado, O. Can., & J. Carpio, " Modelling of combined cycle power plants using biomass",. Renewable Energy, 28(5), 2003, pp. 743-753.	**80-82**
13.	**Authors:**	**Raja Rao.Chella**	
	Paper Title:	**A Qualitative Review on Image Processing Algorithms to Detect Early Stage Lung Cancer**	
	Abstract: Nowa days, the image processing algorithms are being usedwidely in medical systems for detection of lung cancer. It is observed that the life span rate of lung cancer patients increases from 15 to 50% if they were detected at early stages. Detection of cancer cells is the most important issue for medical researchers as it becomes more complex in the treatment process. The detection steps of presence of cancerous cells include image pre-processing, segmentation, feature extraction and classification. In this paper, algorithms for enhancement, segmentation and feature extractionto detect the cancerous tumors which are small and large in size from the lung CT scan images are reviewed. Finally thealgorithms are compared with one another using three parameters called accuracy, sensitivity and specificity. **Keywords:** CT Images, Image Preprocessing, Segmentation, Enhancement, Feature Extraction and Classification. **References:** 1. Ada, Rajneet Kaur "Early Detection and Prediction of Lung Cancer Survival using Neural Network Classifier"IJAIAM. Volume 2, Issue 6, June 2013 2. Avinash. S, Dr. K. Manjunth, Dr. S. Senthil Kumar," An Improved Image Processing Analysis for the Detection of Lung Cancer using Gabor Filters and Watershed Segmentation Technique",IEEE,2016. 3. P.B. Sangamithraa, S. Govindaraju.," Lung Tumour Detection and Classification using EK-Mean Clustering", IEEE –WiSPNET conference,2016. 4. Md. Badrul Alam Miah, Mohammad Abu Yousuf," Detection of Lung Cancer from CT Image Using Image Processing and Neural Network", Electrical Engineering and Information &Communication Technology (ICEEICT) 2015. 5. Taruna Aggarwal, Asna Furqan, Kunal Kalra," Feature Extraction and LDA based Classification of Lung Nodules in Chest CT scan Images",IEEE,2015. 6. Elmar Rendon-Gonzalez and Volodymyr Ponomaryov,"Automatic Lung 7. Nodule Segmentation and Classification in CT Images Based on SVM",IEEE-2016. 8. T. Messay, R. Hardie and S. Rogers, "A new computationally efficient CAD system for pulmonary nodule detection in CT imagery,"Med Image Anal, vol. 14, pp. 390–406, 2010. 9. D. Cascio, R. Magro, F. Fauci, M. Iacomi, and G. Raso, "Automatic detection of lung nodules in CT datasets based on stable 3D mass-spring models," Computers in Biology and Medicine, vol. 42, no. 11, pp. 1098– 1109, 2012 10. Saleem Iqbal et al,"Potential Lung Nodules Identification for Characterization by Variable Multistep Threshold and Shape Indices from CT Images", Computational and Mathematical Methods in Medicine Volume 2014 . 11. M. Alilou, V. Kovalev, E. Snezhko, and V. Taimouri, "A comprehensive framework for automatic detection of pulmonary nodules in lung CTimages," Image Anal Stereol, vol. 33, pp. 13-27, 2014. 12. Dasari Hemalatha, Raja Rao.Ch, S.J.Sugumar," Detection of Lung Cancer Using Marker-Controlled Watershed Transform", International Journal & Magazine Engineering, technology, management Research,Volume 3,Isuue no.10,2016. 13. Vicky Ambule, Minal Ghute, Kanchan Kamble, Shilpa Katre," Adaptive Median Filter for Image Enhancement", International Journal of Engineering Science and Innovative Technology (IJESIT) Volume 2, Issue 1, January 2013. 14. Raajan.P, Muthuselvi.S, Agnes Saleema. A," An Adaptive Image Enhancement using Wiener Filtering with Compression and Segmentation", International Journal of Computer Applications, 2015	**83-87**
14.	**Authors:**	**Bababe Adam B., Ashish Kumar J., Rajiv Kumar**	
	Paper Title:	**Lora Based Intelligent Home Automation System**	
	Abstract: The home and Society are surrounded by "things" which are connected to each other, either directly or indirectly via the internet of things. To have access to controlling these devices remotely with precision within the network when required is a key factor in the process of home automation. There are numerous aspects in this automation that needs to be developed so as to enhance it. This research gives a solution to having a precise and direct control and automatic detection of current state of devices with the use of android application. It also gives a practical implementation of home automation using LoRa in comparison to other technologies. **Keywords:** Home Automation; Internet of Things; LoRa; Android; Smart **References:** 1. Lee, K.M., Teng, W.G. and Hou, T.W., "Point-n-Press: An Intelligent Universal Remote Control System for Home Appliances," IEEE Transactions on Automation Science and Engineering. 2016, 13(3), pp 1308 – 1317.	**88-92**

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	Authors:	**Shaik Noor Mohammad**
	Paper Title:	**Security Attacks in MANETS (Survey Prospective)**

Abstract: Mobile Adhoc Network (MANET) is a dynamic, foundation less Network comprising of agroup of dynamic nodes which communicate with each other. Such networks find application in real-life environment as communication in Battlefields and communication among rescue personnel in disaster affected areas. Recently, mobile ad-hoc networks (MANETs) have gained the attention of research community due to increased adoption of its usage in real life applications. Due to fundamental characteristic of being Adhoc and insecure medium the most challenging job in MANETS is security. In this paper we present a brief survey of security attacks and existing prevention techniques.

Keywords: Mobile Adhoc Network (MANET), Security, Attacks, Routing, Mobile nodes, Dynamic Topology

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16.	**Authors:**	**Sandeep P.**

	Paper Title:	**A Comparative Analysis of Optimization Techniques in Cognitive Radio (QoS)**

Abstract: Wireless Technology has seen a tremendous advancement in recent times. There has been a huge growth in multimedia applications over the wireless networks. The requirement of significant bandwidth for multimedia services has increased the demand for radio spectrum. The scarcity of radio spectrum has become a challenge for the conventional fixed spectrum assignment policy. Thus, Cognitive Radio (CR) has emerged as a new exclusive choice to address the spectrum underutilization problem by enabling users to opportunistically access unused spectrum bands. It offers a promising solution to meet this demand by fully utilizing available spectrum resources. It improves the utilization of the wireless spectrum by allowing the secondary users to access the primary channels in an opportunistic manner. Efficient utilization of frequency spectrum is possible using dynamic spectrum allocation. Optimization techniques like Genetic Algorithm (GA), Ant Colony Optimization (ACO) and Mutated Ant Colony Optimization (MACO) are discussed here to meet the users QoS needs in the Cognitive Radio. The transmission and environmental parameters along with performance objectives of cognitive radio are studied and compared in the paper using different optimization techniques. In this paper, the results of various optimization techniques in Cognitive Radio System along with CR objectives are analysed to meet users QoS.

Keywords: Cognitive Radio Genetic Algorithm, Ant Colony Optimization, Mutated Ant Colony Optimization, QoS Provisioning.

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17.	**Authors:**	**Francis Yao Anyan**
	Paper Title:	**Assessment of Indigenous Knowledge usage Among Small Scale Farmers in Kpando Municipality, Ghana**

Abstract: The study assessed the indigenous knowledge (IK)usage among small scale farmers. The study was conducted in the Kpando Municipality with a sample size of 140 respondents. Simple random sampling technique was used to collect data from respondents. Data collected were analyzed using descriptive tools such as frequencies, percentages, mean and standard deviation. The study reveal that majority of small scale farmers in the municipality are female. Also farmers in the municipality frequently use indigenous knowledge such as Organic manure, Mulching, Bush fallowing, Harvesting with hand and Rain water harvesting.

Keywords: Mulching, Harvesting, Indigenous, Knowledge, Bush fallowing, standard deviation.

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18.

Authors: **N. Nachammai, R. Kayalvizhi**

Paper Title: **Moth Flame Optimisation Algorithm for Control of LUO Converter**

Abstract: Because of the effects of the parasitic elements, the output voltage and power transfer efficiency of all DC-DC converters are restricted. In order to eliminate the limitations caused by parasitic elements, the voltage lift technique is successfully applied to DC-DC converters resulting in a new series called Luo converters. Linear control methods ensure stability and good control only in small vicinity around the operating point. These classical controllers are designed using mathematical models by linearising non-linearities around the nominal operating point. Since these controllers are also sensitive to the operating points and parameters variations, a high degree of accuracy cannot be guaranteed from them. To ensure that the controllers work well in large signal conditions and to enhance their dynamic responses, intelligent method using fuzzy technique is suggested.The performance of a fuzzy logic controller depends on its control rules and membership functions. Hence, it is very important to adjust these parameters to the process to be controlled. A method is presented for tuning fuzzy control rules by Moth Flame Optimization(MFO) algorithm to make the fuzzy logic control systems behave as closely as possible to the operator or expert behavior in a control process. The tuning method fits the membership functions of the fuzzy rules given by the experts with the inference system and the defuzzification strategy selected, obtaining high-performance membership functions by minimizing an error function. Moth-flame Optimization (MFO) algorithm is one of the newest bio inspired optimization techniques in which the main inspiration of this optimizer is the navigation method of moths in nature called transverse orientation.MFO has a fast convergence rate due to use of roulette wheel selection method. Moth-Flame Optimizer (MFO) is used to control the LUO converter. MFO-Fuzzy is used to search the fuzzy rules and membership values to achieve minimum ISE, ITAE, settling time and peak overshoot. The proposed method is compared with fuzzy controller. Simulation results prove that the MFO algorithm is very competitive and achieves a high accuracy.

Keywords: Moth Flame Optimisation Algorithm, Fuzzy Logic Controller, Positive Output Elementary LUO Converter.

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19.

Authors: **Vipanjot Kaur Sidhu, Vijay Kumar Joshi**

Paper Title: **A Novel Technique for Fault Recovery in Mobile Cloud Computing**

Abstract: Cloud computing is a technology or distributed network where user can move their data and any application software on it. But there is some issues in cloud computing, the main one is security because every user store their useful data on the network so they want their data should be protected from any unauthorized access, any changes that is not done on user’s behalf. Task allocation is one of the issue of the cloud computing. Load imbalance occurs due to limited resources available and leads to the fault occurrence situation. In this paper, a novel technique has been proposed based on weights to overcome faults occurrence problem. In this work improvement will be proposed in

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agent base load balancing algorithm for task reallocation and reduced fault detection time in cloud architecture.

Keywords: Cloud computing, deployment models, load balancing, fault tolerance

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20.

Authors:	**Sathya Jose. S. L , K. Sivaraman**
Paper Title:	**Modified SDROM Filter**

Abstract: Noise is any unwanted component in an image. It is important to eliminate noise in the images before some subsequent processing, such as edge detection, image segmentation and object recognition. This work mainly concentrates on automatic detection and efficient removal of impulse (salt and pepper) noise. For automatic detection of impulse noise, a method based on probability density function is proposed. The basic idea of automatic detection is that the difference between the probabilities of black and white pixels will be small. After detecting the presence of impulse noise in an image, we have to remove that noise. For the removal of impulse noise a new efficient impulse noise removal method (Modified SDROM filter) is proposed. The Modified SDROM consists of two parts 1) Impulse detector and 2) Filter. The results show that this method has higher performance than other methods in terms of PSNR values and SSIM-Index values.

Keywords: impulse noise, probability density function, PSM Filter, SDROM Filter, PWMAD Filter, Modified SDROM, PSNR, SSIM Index.

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21.

Authors:	**Jeena R S, Sukesh Kumar A**
Paper Title:	**GUI Based Model for Stroke Prediction**

Abstract: The innovations in the field of artificial intelligence have paved way to the development of tools for assisting physicians in disease diagnosis and prognosis. Stroke is a leading cause of disability in developing countries like India. Early diagnosis of stroke is required for reducing the mortality rate. Research shows that various physiological parameters carry vital information for the prediction of stroke. This research work focuses on the design of a graphical user interface (GUI) for the prediction of stroke using risk parameters. Data collected from International Stroke Trial database was successfully trained and tested using Support vector machine (SVM). The linear kernel of SVM gave an accuracy of 90 %. This work has been implemented in MATLAB which can be used to predict the probability of occurrence of stroke.

Keywords: Stroke, Graphical User Interface (GUI), Support Vector machine (SVM)

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22.

Authors: **Neha Mahakalkar, Vaishali Sahare**

Paper Title: **Survey on Privacy Preserving Authentication Protocol in Cloud Computing**

Abstract: Cloud computing provides facilities of shared computer processing resources and data to computers and other device on demand. System environment will develop by using three key entities trusted third party, data owner and user. The concept of shared authority based privacy preserving authentication protocol i.e., SAPA used to develop system to perform shared access in multiple user. Security and privacy issue as well as shared access authority will be achieve by using access request matching mechanism e.g. authentication, user privacy, user can only access its own data fields. The multiple users want to share data so that purpose re-encryption is used to provide high security for user private data. Universal Composability (UC) model use to prove that design of SAPA correctness. Develop a system with high security and attack free by analysing different attack related to the system. Privacy preserving data access authority sharing is attractive for multi user collaborative cloud applications

Keywords: authentication, security, shared access and cloud computing

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23.

Authors: **Jerrin Thomas Panachakel**

Paper Title: **Automatic Eigen Face Method**

Abstract: Muzzle print recognition is the process of finding any muzzle in the image. It is a two-dimension procedure used for detecting muzzles and analyzing the information contained in the muzzle image. Here the muzzle images are projected to a feature space or face space to encode the variation between the known muzzle images. In this paper Principal Component Analysis (PCA) is used for dimension reduction and the projected feature space is formed using fuzzy algorithm. The above method can be used to recognize a new muzzle in unsupervised manner.

Keywords: Muzzle Print, Principal Component Analysis (PCA), Membership Function.

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24.

Authors: **Komati Sathish**

Paper Title: **A Study on Check Pointing Protocols for Mobile Distributed Systems**

Abstract: A large number of distributed checkpointing protocols have appeared in the literature.a distributed

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checkpointing protocol could be the best in a specific environment, but not in another environment.Distributed snapshots are an important building block for distributed systems and are useful for constructing checkpointing protocols among other users. Communication-Induced Checkpointing protocols are classified into two categories in the literature: Index-based and Model-based.Recently, more attention has been paid to providing checkpointing protocols for mobile systems. check point is defined as a designated place in a program at which normal processing is interrupted specifically to preserve the status information necessary to allow resumption of processing at a later time. This paper surveys the protocols which have been appeared in the literature for checkpointing in mobile distributed systems.

Keywords: Checkpoint/restart, checkpointing protocols, Distributed systems, rollback recovery, fault tolerant computing

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25.

Authors:	**Babak Mehravaran, Hossein Ansari, Ali Asghar Beheshti**
Paper Title:	**Nozzle Filter Modification for Water Pre-Treatment Technology In Water Treatment Plants (Case Study: Toroq Water Treatment Plant)**

Abstract: Nozzle filtration can be considered as a major pre-treatment process for water and waste water, since they efficiency separate fine solids particles over prolonged periods without addition of chemicals. Proper nozzle performance can reduce operating costs, reduce maintenance costs, and improve cleaning quality. this review article summarized and evaluates modification to nozzle filtration technology .achieved results in this study shows that nozzle filtration may be considered as efficient pre-treatment process incase surface water is used as water supply. With pass of muddy water sample due to current rainfall in stilling basin of Toroq water treatment plant from nozzle filters in laboratory pilot, Turbidity Removal efficiency and also Suspended solids equal 9.6% and 86% respectively was obtained .And the results of Additional tests represent that Turbidity Removal and also solid suspensions efficiency by nozzle filters due to algae making inlet water to Toroq water treatment plant in warm seasons is 4/6% and 47% respectively The obtained results of the study indicate that use nozzle filters caused Increase the efficiency of the process water treatment, and it is prevents from emergency exits the Toroq water treatment plant.

Keywords: Nozzle filter, Muddy water, Algae water, Suspended solids, turbidity

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26.

Authors: **Yao-Wen Tsai, Cong-Trang Nguyen**

Paper Title: **Finite Time Sliding Mode Controller based on Reduced-Order Observer for the Mismatched Uncertain Systems with a Time Delay**

Abstract: This paper presents the design of the finite time sliding mode controller based on reduced order observer for time-delay systems with mismatched uncertainties. The main achievements of work are: (1) a suitable reduced order observer (ROO) is constructed to estimate the unmeasurable state variables, (2) a finite time sliding mode controller (FTSMC) is designed by employing the estimated variables, and (3) by the application of the Lyapunov stability theory and the linear matrix inequality (LMI) technique, the stability of the overall closed-loop mismatched uncertain systems with a time delay is guaranteed in sliding mode under sufficient condition. Finally, the design procedure is given to summarize the proposed method.

Keywords: Variable Structure Control (VSC), reduced- order observer (ROO), finite-time convergence, mismatched uncertainty, time-varying delay.

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27.

Authors: **Krishna Samalla**

Paper Title: **A Novel Algorithm for Multiple Data Sharing Via Cloud Storage**

Abstract: As the way that computing concepts gives the cloud computing, which permits once needed and low maintenance usage of resources, but the information is shares to some cloud servers and numerous privacy connected considerations emerge from it .Various schemes like primary based on the attribute based encoding are developed to secure the cloud storage. Most of the work looking at the information privacy and therefore the access management, while less attention is given to the privilege management and the privacy. An economical scientific discipline approach for information sharing wherever information is shared among a bunch of users as information. How to firmly and with efficiency share a group of information associated with any subject areas with others in cloud storage. Development of new novel concept of Key Aggregate Searchable cryptography (KASE). This concept is enforced through development of a concrete key-aggregate searchable cryptography framework theme. This scheme is delineate as wherever knowledge an information owner solely has to generate and distribute one mixture key to a data user for sharing an outsized variety of documents and on the opposite aspect user solely has to submit one mixture trapdoor to the cloud server, so that he/she will question over the shared documents by the assistance of generated single mixture trapdoor. Advanced Key sharing system based on hint text methodology is created to share the information safely. Once the data sharing is completed then the key combination differs from its actual kind. So the user cannot guess the key combination cryptosystem and this method provides economical answer than the prevailing ones.

Keywords: Data Security, Cloud, Integrity, Bulk Request, Bulk Response, Dynamic Keys.

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28.

Authors: **Ahmed Shany Khusheef, Abdulkareem Shaheed Sabr**

Paper Title: **Investigation of Converting a Building to Operate by Solar Energy**

Abstract: Many governments recognize the advantages of generating the electricity from solar energy and therefore, they offer generous incentives and cash rebates to install photovoltaic (PV) systems. Despite Iraq that is, as result of the electric shortages, 90% of its households are dependent on diesel generators that are controlled by independent operators, solar energy has not been widely utilized. This paper provides the fundamental information about design and constructing of PV system. It is also presenting a cost analysis of PV system that delivers about per day. It is found that the solar energy price (0.1368$/kWh) is almost matching the actual cost of fuel-based electrical generation (0.13$/kWh [1]). Therefore, the PV systems can be competitive with the diesel power generators that are used by Iraqis if a source of funding is offered to offset the enormous up-front (initial) cost of PV systems.

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Keywords: PV system, Cost analysis, Levelized cost of electricity (LCOE), Electric demand.

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Authors: **Poonam Rajput, Prateek Wankhade**

Paper Title: **A Review Paper on Microstrip Patch Antenna Used in Wlan Systems**

Abstract: A compact microstrip patch antenna became a very useful in communication systems. Properties like compactness, light weight, high bandwidth make it a good candidate of communication system. This paper reviews the performance analysis of Compact Dual-Band Microstrip Antenna for IEEE 802.11a WLAN Application (2014), comparative analysis of s-shaped Multiband microstrip patch Antenna (2013), Dual-Band Antenna with Compact Radiator for 2.4/5.2/5.8 GHz WLAN Applications (2012), A Slot-Monopole Antenna for Dual-Band WLAN Applications (2011) and Compact Broadband Slotted Rectangular Microstrip Antenna (2009). The paper also discusses the technology used in order to bring the required changes in terms of improved performance characteristics.

Keywords: WLAN (Wireless local area network), Dual band, Transmission line, Microstrip antenna, Monopole antenna, Dual band antenna, RMSA, Water Patch, L-probe.

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Authors: **Ibrahim F. Shaker, Tamer F. Fath-Allah, Mohamed M. El-Habiby, Ahmed E. Ragheb, Alaa Al-Din I. Awad**

Paper Title: **Increasing PPP Accuracy using Permanent Stations Corrections**

Abstract: One of the main current problems facing Global Positioning System (GPS) is to get the positions with high accuracy and low cost, effort and time. Two techniques are used in GPS positioning, which are the relative and point positioning. In common, the first technique provides the higher accuracy, but with higher cost and effort. Another kind of point positioning is the Precise Point Positioning (PPP) which counts on GNSS precise products. It is adequate for many applications that requires the decimeter level accuracy using one receiver, but requires scientific software or online services for data processing. The main challenge here is to raise the accuracy of PPP to add other applications suited to the gained accuracy. The main objective of the current study is to test different mathematical models producing positional corrections to select the best set depending on synchronized data and validate the selected model in synchronized and non-synchronized cases depending on data of two different campaigns. These corrections - produced from permanent stations- are added to the static PPP coordinates of the tested points near the permanent stations to reach the highest possible accuracy depending on GPS single frequency observations using a scientific package. The obtained results offered a synchronized average positional error reaching to 0.074m and RMSE of 0.023m in the first campaign and 0.146m with RMSE of 0.061m in the second campaign. It reaches 0.156m with RMSE of 0.074m in the best non-synchronized case. The user can raise the accuracy of single frequency static PPP when the data of four synchronized permanent stations are available in the same observational time or within 4 days

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before or after the observational time.

Keywords: GPS, Non-synchronized, Precise Point Positioning (PPP), Single frequency, Synchronized.

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31.

Authors:	**M. Jeba Jeeva Rani, G. Allen Gnana Raj**
Paper Title:	**Synthesis, Characterization and Photocatalytic Activity of Amino Acid Doped Metal Free g-C_3N_4 Composite Photocatalyst**

Abstract: The g-C3N4-Amino acid (CNA-g-C_3N_4) composite photocatalyst was synthesized by simple co-polymerization process. The photocatalyst was characterized by X-ray diffraction (XRD), Scanning election microscopy (SEM) with EDAX and FT-IR analysis. Rhodamine-B (Rh-B) dye solution under visible light irradiation was used to determine the photocatalytic activity. The photocatalytic activity of CNA-g-C3N4 composite posses long term stability and visible light activity than bare g-C3N4.

Keywords: Amino acid, composite, metal free, g-C_3N_4, melamine

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Authors:	**Sumaira M.Hayat Khan, Ayyaz Hussain, Imad Fakhri Taha Alshaikhli**
Paper Title:	**An Adequate Image Retrieval Technique Based on Global Level Feature Extraction**

Abstract: Efficient and effective methods are required for the retrieval of relevant data from data stores. The two main approaches for retrieving a required image from a database are known as the local approach and the global approach. This paper presents the technique based on global approach of image feature extraction and comparison. Image features are calculated by taking into account image as a whole. All the three rudimentary image features like; color, texture and shape are utilized in the process of feature vector calculation. Besides these basic image features, Edge Histogram and Fourier Descriptors are also computed to extract edge information and shapes of the objects in the image respectively. Similarity between two images is determined by calculating Euclidean distance between their feature vectors. The experiments in this study were performed on natural images of diverse semantics from a Corel image database, and showed obvious improvement in results compared to several noble systems in the literature.

Keywords: Content Based Image Retrieval, Feature Extraction, Feature Vector, Similarity Measure, Fourier descriptor, Edge Histogram Descriptor.

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Authors:	**Deshmukh Bhakti S., Gharte Sneha H., Nagare Shruti R., H. R. Deshmane**
Paper Title:	**Agriculrtural Robot for Plant Health Indication**

Abstract: It is difficult task for producing agricultural products, various micro-organisms, pests and bacterial diseases attack on plants. These diseases can occur through the leaves, steams or fruit inspection. This paper covers technique of image processing for early detection of plant disease through feature extraction of leaf and preprocessing of image from RGB (YCbCr) to different color space conversion, image enhancement; segment the region of interest. Minimum distance classifier is used to compare extracted features from original image and stored database. When plant disease is detected fertilizer motor gets ON. By using Graphical User Interface symptoms and fertilizer for detected disease will displayed on computer. The robot has also watering mechanism it will water the plants according to their needs by observing temperature and LCD will display the temperature. Working of the Robot is based on Bluetooth.

Keywords: Plant Health, Open Agriculture, Bluetooth, Database.

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34.	**Authors:**	**Dipali Wankhede, S. G. Tuppad**	
	Paper Title:	**Improvising of web Recommendation System by using K-Means and Bitap Algorithm**	
	Abstract: Increasing the amount of information over the Internet in recent years has led to the increased risk of flooding of information which in turn has created the problem of access to relevant data users. Also with the rise in the number of websites and web pages, webmasters find it difficult to make the content according to user need. Demand for information Users can imagine evaluating web user browsing behavior. Web Usage Mining (WUM) is used to extract knowledge from access logs Web user by using Data mining techniques. One of the applications is WUM recommendation system that is customized information filtering technique used to determine whether any of a user approved a particular article or to identify a list of items that it can be of great importance to the user. In this document architecture that integrates product information with the user access to log data and then generates a set of recommendations for it is presented that particular user. The application has registered encouraging in terms of precision, recall and F1 results metrics. **Keywords:** Web Usage mining, Online Web Recommendation System, Clustering, Pattern Matching, Boyer Moore, K-Means, Recommendation. **References:** 1. Cormen, T.H., Leiserson, C.E., Rivest, R.L., Introduction to Algorithms, Chapter 34, MIT Press, 1990, pp 853-885. 2. Knuth, D., Morris, J. H., Pratt, V., "Fast pattern matching in strings," SIAM Journal on Computing, Vol. 6, No. 2, doi: 10.1137/0206024, 1977, pp.323–350. 3. R.S. Boyer, J.S. Moore, "A fast string searching algorithm, "Communication of the ACM, Vol. 20, No. 10,1977, pp.762– 772. 4. R. N. Horspool, "Practical fast searching in strings," Software—Practice and Experience, Vol. 10, No. 3, 1980, 501–506. 5. Sunday, D.M., "A very fast substring search algorithm," Communications of the ACM, Vol. 33, No. 8, 1990, pp. 132- 142. 6. Smith, P.D., "Experiments with a very fast substring search algorithm," Software-Practice and Experience, Vol. 21, No. 10, pp.1065-1074. 7. Crochemore, M., Czumaj, A., Gasieniec, L., Jarominek, S., Lecroq, T., Plandowski. W., Rytter, W., "Speeding up two string matching algorithms," Algorithmica, Vol. 12, No. 4/5, 1994, pp.247-267. 8. RVVSV Prasad, V Valli Kumari "A Categorical Review of Recommender Systems" , International Journal of Distributed and Parallel Systems (IJDPS) Vol.3, No.5, September 2012 Hadi Khosravi Farsani, and Mohammadali Nematbakhsh "A Semantic Recommendation Procedure for Electronic Product Catalog", World Academy of Science, Engineering and Technology 22 2006. 9. Neelam Duhan, A. K. Sharma and Komal Kumar Bhatia, "Page Ranking Algorithms: A survey", in proceedings of the IEEE International Advanced Computing Conference (IACC), 2009. 10. Balint Domolki, An algorithm for syntactical analysis, Computational Linguistics 3, Hungarian Academy of Science pp. 29–46, 1964. 11. R. K. Shyamasundar, Precedence parsing using Domolki's algorithm, International Journal of Computer Mathematics, 6(2)pp 105–114, 1977. 12. Udi Manber, Sun Wu. "Fast text searching with errors." Technical Report TR-91-11. Department of Computer Science, University of Arizona, Tucson, June 1991. 13. R. Baeza-Yates and G. Navarro. A faster algorithm for approximate string matching. In Dan Hirchsberg and Gene Myers, editors, Combinatorial Pattern Matching (CPM'96), LNCS 1075, pages 1–23, Irvine, CA, June 1996. 14. G. Myers. "A fast bit-vector algorithm for approximate string matching based on dynamic programming." Journal of the ACM 46 (3), May 1998, 395–415. 15. Xavier Amatriain, Alejandro Jaimes, Nuria Oliver, and Josep M. Pujol, Data Mining Methods for Recommender Systems. 16. R.Suguna, D, Sharmila, "Clustering Web log Files – A Review", International Journal of Engineering Research & Technology (IJERT) Vol. 2 Issue 4, April – 2013 ISSN: 2278-0181]	**189-192**
35.	**Authors:**	**Swagata S. Mawande, Hemlata Dakhore**	
	Paper Title:	**Review of Robust Video Watermarking Using DWT, SVD and DCT**	
	Abstract: Due to increase in growth of internet, users of networks are increasing rapidly. Owners of the digital products are concerned about illegal copying of their products. Security and copyright protection are becoming important issues in multimedia applications and services. Digital watermarking is a technology used for copyright protection of digital media. Here ownership information data called watermark is embedded into the digital media without affecting its perceptual quality. In case of any dispute, the watermark data can be detected or extracted from the media and use as a proof of ownership. Digital video watermarking scheme based on Discrete Wavelet Transform and Singular Value Decomposition. Design of this scheme using Matlab is proposed. Embedded watermark is robust against various attacks that can be carried out on the watermarked video. **Keywords:** Digital watermarking, Matlab, DWT,SVD,DCT **References:** 1. Asna Furqan, Munish Kumar, Study and Analysis of Robust DWT-SVD Domain Based Digital Image Watermarking Technique Using MATLAB, 2015 IEEE International Conference on Computational Intelligence & Communication Technology © 2015 IEEE 2. Madhuri Rajawat, D S Tomar, A Secure Watermarking and Tampering detection technique on RGB Image using 2 Level DWT 2015 Fifth International Conference on Communication Systems and Network Technologies, 2015 IEEE 3. A.Umaamaheshvari, Dr.K.Thanushkodi, Robust Image Watermarking Based On Block Based Error Correction Code International Conference on Current Trends in Engineering and Technology, ICCTET'13 4. Hemdan, N. El-Fishaw, G. Attiya and F. A. El-Samii, "Hybrid Digital Image Watermarking Technique for Data Hiding", IEEE 30th National Radio Science Conference, (2013) 5. Dattatherya, S. Venkata Chalam and Manoj Kumar Singh, "A Generalized Image Authentication based on Statistical Moments of Color Histogram," Int. J. on Recent Trends in Engineering and Technology,, Vol. 8, No-1, Jan. 2013 6. Habibollah Danyali, Morteza Makhloghi, and Fardin Akhlagian Tab,"Robust Blind DWT based Digital Image Watermarking Using Singular Value Decomposition," International Journal of Innovative Computing, Information and Control, Vol. 8, No.7, July 2012	**193-194**
36.	**Authors:**	**Kanchan P. Borade, Shewale Pooja J, Tayade Dipika P**	
	Paper Title:	**"ATM Theft Monitoring and Security System using Raspberry Pi2"**	
	Abstract: Automated Teller Machines (ATMs) security is the field of Study that gives a solution that provides multiple points of protections against theft .This project deals with prevention of ATM theft from robberies overcome		**195-197**

	the drawback found in existing technology in our society. ATM video surveillance cameras and ATM monitoring options, security specialists are ready to help the people get more out of the ATM security and ATM loss prevention systems. Most of the time it happens that theft enter in ATM, collect the money, start running police cannot capture theft so, to avoid such condition this project gives real time data of sensor, images of theft and mechanism of door and shutter lock. Here Raspberry pi2 is a series of small computer used, to interface the camera, vibration sensor, GSM, DC motor, Buzzer. There must be the installation of the raspbian operating system. The aim of using raspberry pi 2 is its ease of portability, ease of connections, and ease of handling. The setup is proposed for ATM security, comprising of the modules namely, authentication of shutter lock, web enabled control, sensors and camera control. **Keywords:** Raspberrypi2, Camera, Vibration Sensor,D Cmotar, GSM, Buzzer. **References:** 1. Sivakumar, Gajjala Askok, k. Sai Venuprathap "Design and Implementation of Security Based ATM theft Monitoring system". e- ISSN: 2278-7461, p-ISSN: 2319- 6491 Volume 3, Issue 1 (August 2013) PP: 01-07, ATM theft monitoring system with the help of LPC2148. 2. S.P.Balwir, R.D.Thakare, K.R.Katole "Secured ATM transaction system". Volume 4, Issued 4, April 2014, Transaction system is used. 3. P.Kannan, Ms. P. Meenakshi vidya "Design and Implementation of Security Based ATM theft Monitoring system". ISSN: 2320-0790, ATM theft monitoring system with the help of microcontrol00ler. 4. R.Senthil Kumar, K.R.Sugavanam, D.Gajalakshmi "Novel vigilant real time monitoring and security system for ATM". 10th September 2014. Vol. 67No.1© 2005 - 2014 JATIT & LLS, Real Time Monitoring and Security System for ATM Centre. 5. Raj M M.E, Anita Julian "Design and Implementation of Anti-theft ATM Machine using Embedded Systems". 2015 International Conference on Circuit, Power and Computing Technologies [ICCPCT], Embedded based ATM security system.	
37.	**Authors:**	**Srujana Rongali, Radhika Yalavarthi**
	Paper Title:	**An Improved Ant Colony Optimization for Parameter Optimization using Support Vector Machine**
	Abstract: Support Vector Machine (SVM) is one of the significant classification technique and it can be applied in various areas like meteorology, financial data analysis etc. The performance of SVM is influenced by parameters like C, which is cost constant and kernel parameter. In this paper, an improved Ant Colony Optimization (IACO) technique is proposed to optimize the parameters of SVM. To evaluate the proposed approach, the experiment adopts five benchmark datasets. The developed approach was compared with the ACO-SVM algorithm proposed by Zhang et al. The experimental results of the simulation show that performance of the proposed method is encouraging. **Keywords:** Support vector machines, Ant colony optimization, Parameter optimization **References:** 1. Vapnik VN. The Nature of Statistical Learning Theory. New York, NY: Springer New York; 1995. doi:10.1007/978-1-4757-2440-0. 2. Li X, Zheng A, Zhang X, Li C, Zhang L. 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38.

Authors: **Sonali Kadam, Rutuja Pawar, Shweta Phule, Priyansha Kher, Manisha Kumari**

Paper Title: **Ensemble of Classifiers for Intrusion Detection System**

Abstract: The continuous growth in Network attacks is being a serious problem in software industry. Intrusion detection framework is utilized to distinguish and break down system assaults so IDS should be upgraded that can screen the framework and can trigger the readiness in the framework. Numerous calculations have been proposed by various creators to enhance the execution of IDS yet at the same time they can't give appropriate or finish arrangement. In proposed framework creators perform probes distinctive blends of Bayesian system, Naïve Bayes, JRip, MLP, IBK, PART and J48 classifier. What's more for each mix two pre-processing procedures Normalization and discretization will be connected. The advantage of proposed approach is the combi-nation detecting majority attacks will be ensemble with the re-spective pre-processing technique. Hence, any kind attack in the network can be detected with best accuracy.

Keywords: Bayesian network, Intrusion Detection System, IBK. JRip, J48, MLP, Naïve bayes, PART.

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Authors: **Ahmed F. AlHallaq, Bassam A. Tayeh, Samir Shihada**

Paper Title: **Investigation of the Bond Strength Between Existing Concrete Substrate and UHPC as a Repair Material**

Abstract: The performance of any repaired concrete structure, depends on the quality of the interfacial transition zone of the composite system formed by the repair material and the existing concrete substrate. The main aim of this paper is to evaluate the bonding behavior between normal strength concrete (NSC) substrate as an old concrete and Ultra High Performance Concrete (UHPC) as a repair material. In order to assess the bond behavior, standard slant shear test and splitting tensile test were carried out. The relation between surface roughness and bond strength in shear and indirect tension for different surfaces roughness has been assessed. The old concrete surfaces were roughened by mechanical wire brush, scarifying using an electrical grinder, scabbling by a mechanical drill and as cast without roughening. Analysis of the results indicates that bond strength increases when UHPC is used for shear and tension alike. For the scabbling technique, the shear strength yields values 251.8% higher than the those for as cast surface and 153% for tension strength. In addition, UHPC show advantages that qualify it for repairing and strengthening techniques including adding a new concrete to the existing concrete substrate. In general, rough surface preparation leads to a higher bond strength. Ra coefficient is a representative parameter and related to the bond strength, particularly, for shear strength. Finally, the results showed that tension strength is less sensitive to the surface roughness level and more proportional to the repair material strength.

Keywords: Bond strength; Concrete overlay; Old concrete; Slant shear test; Splitting test; Silica fume; Substrate; Surface roughness; Ultra High Performance Concrete,

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40.

Authors:	**K. Bikshalu, Prathap Soma**
Paper Title:	**Design and Simulation of 16 Bit Arithmetic Unit using Gating Techniques in Cadence 45nm Technology**

Abstract: In any system ALU is the most important part of a processor as it is required for calculating the address of each memory location. It performs a particular arithmetic and logic operations on each set of operands, based upon the instructions given by the processor. In some processors ALU is split into two units, an Arithmetic unit (AU) and logic unit (LU). Some processors possess a couple of Arithmetic units – one for the fixed point operations and another for the floating point operations. As AU operates at a very high speed and it is accessed by the system frequently, it contributes to one of the highest power-density locations on the processor. Because of this reason, there exist thermal hotspots and sharp temperature gradients inside the execution core, thereby reducing the reliability as well as the battery life of the system. Therefore, there is a great need for the development of a power optimized AU design. This encourages powerfully for the design of a power optimized AU that satisfies the superior needs along with the reduction of average power consumption. This paper presents the various power optimized techniques for 16bit ALU like input gating, power gating in 45nm using cadence. Finally, comparison among all proposed techniques are represented.

Keywords: Arithmetic unit (AU), Power gating, Input Gating.

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41.

Authors: **Loubna Berrich, Lahbib Zenkouar**

Paper Title: **The Adaptation of a Microstrip Dipole Antenna for RFID Applications**

Abstract: Radio frequency identification (Radio Frequency Identification) is a technology used primarily to identify tagged objects or to track their locations. An RFID tag is composed of integrated circuit. To design the antennas, it is necessary that the antenna must have an impedance value equal to the conjugate of the impedance of the IC to have a good adaptation allowing the maximum transfer of power. For the implementation of the impedance matching, there are several techniques. In this work, we are interested in the technique of adaptation T-match and the technique of adaptation by coupling. The T-match technique is based on the insertion of a second folded dipole at the center of the first dipole. This technique is modeled by an equivalent circuit to be able to calculate the dimension of the folded dipole to have a new input impedance of the antenna equal to the conjugate of the impedance of the integrated circuit. The second technique is based on the supply of the dipole via a small loop with inductive coupling placed in close proximity to the radiating body. The software used in this work is the Ansoft HFSS software which is based on the finite element method (FEM). The results obtained are satisfactory with a reflection coefficient that exceeds -22 dB.

Keywords: Microruban Dipole Antenna, RFID, Tag.

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