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1.	Authors:	Tahereh Nasrollahzadeh, Abdul Kadir Marsono, Masine Md. Tap		
	Paper Title:	Applying the Principles of Blue Ocean Strategy in Supply Chain Management on Corporate Performance		
	<p>Abstract: This paper aims to expand the justification on role of the principles of blue ocean strategy (BOS) in supply chain management (SCM) for increasing the corporate performance of companies. The principle of blue ocean strategy is first explain in supply chain management field. Then using a structural model, the role of applying these principles on corporate performance is illustrated. In order to verify the BOS model, a study was presented and distributed among the 68 international companies. Based on the results, SCM and corporate performance are found to be mostly affected by the Overcome key organizational hurdles, reconstruct market boundaries and Focus on the big picture, not the numbers, respectively.</p> <p>Keywords: Blue ocean strategy (BOS)- supply chain management(SCM) - corporate performance – PLS path modeling</p> <p>References:</p> <ol style="list-style-type: none"> Ahangar, R. (4 January, 2011). The relationship between intellectual capital and financial performance: An empirical investigation in an Iranian company. <i>African Journal of Business Management</i> , 88-95. Bollen, L., Vergauwen, P., & Schnieders, S. (2005). Linking Intellectual Capital and Intellectual Property to Company Performance. <i>Management Decision</i> , 43(9), 1161-1185. Bontis, N; Chong Keow, W. C; Richardson., S;. (2002). Intellectual Capital and Business Performance in Malaysian Industries. <i>Journal of Intellectual Capital</i> , 1(1), 85-100. Bontis N., Crossan M. and Hulland J. (2002), Managing Organizational Learning Systems by Aligning Stocks and Flows, <i>Journal of Management Studies</i>, 39 (4), 437-469. Clarke, M., Seng, D., & Rosalind, W. H. (2010). Intellectual Capital and Firm Performance in Australia. Working paper series no 12. Cohen, S., & Kaimenakis, N. (2007). Intellectual Capital and Corporate Performance in Knowledge-intensive SMEs. <i>The Learning Organisation</i> , 14(3), 241-262. Henseler, J; Ringle, C.M; Sinkovics, R.R;. (2009). The use of partial least squares path modeling in international marketing. <i>Advances in International Marketing</i> (pp. 277-3). Bingley: Emerald Group Publishing. Hitt, Michael A. et all. (2001). Direct and moderating Effects of human Capital on Strategy and Performance in Professional Service Firms: A Resource-Based Perspective. <i>Academy of Management Journal</i>, 44 (1), 13-28. Iswati, Sri, Muslich Anshori. The Influence of Intellectual Capital to Financial Performance at Insurance Companies in Jakarta Stock Exchange (JSE). <i>Proceedings of the 13th Asia Pacific Management Conference</i>, Melbourne, Australia, 2007, 1393-1399. Jafari Samimi, A., & Mohammadi, R. (2011). Measuring Customer Satisfaction Index (CSI) in Iranian Tile Industry Using PIS Path Modeling Technique. <i>Middle-East Journal of Scientific Research</i> , 8: 141-149. Low, J. and Kalafut, P.C. (2002). <i>Invisible Advantage How Intangibles are Driving Business Performance</i>. Cambridge: Perseus Publishing. Trujillo, G. (2009). <i>PATHMOX Approach: Segmentation Trees in Partial Least Squares Path Modeling</i>. Doctoral Degree, Universitat Politecnica de Catalunya 			1-4
Authors:	Dharuv Singla, K. S. Dhillon, Tarun Goyal, Harpreet Singh Oberoi			
Paper Title:	Analysis of MRR and SR of Die Steel H-11			
2.	<p>Abstract: This study has been done on Die Steel H-11 with the Electro discharge machining. Input parameters are current, pulse on time, pulse off time and flushing pressure. Hexagonal copper electrode is used as a tool. The work has been analyzed by using Taguchi's method for the material removal rate (MRR) and surface roughness (SR). Pulse on time is most effective for MRR and current is most effective for SR.</p> <p>Keywords: H-11, EDM, MRR, SR, Taguchi Design</p> <p>References:</p> <ol style="list-style-type: none"> Mehra Rahul, Kalra C. S., Kumar Ajay, Goyal Tarun, "Comparison of surface roughness of ductile cast iron using Taguchi design", <i>J. Acad. Indus. Res.</i> (2013), Vol. 1(10), pages 631-633. Chen D.C., Jhang J. J., Guo. M. W., "Application of Taguchi design method to optimize the electrical discharge machining", <i>Journal of Achievements in Material and Manufacturing Engineering</i> (2013), Vol. 57, Issue 2, pages 76-82. Raghuraman S., Thirupathi K., Panneerselvam T., Santosh S., "Optimization of EDM parameters using Taguchi method and Grey relational analysis for mild steel IS 2026", <i>International Journal of Innovative Research in Science, Engineering and Technology</i> (2013), Vol. 2, Issue 7, pages 3095-3104. Subrahmanyam S. V., Sarcar M. M. M., "Evaluation of optimal parameters for machining with Wire cut EDM using Grey-Taguchi method", <i>International Journal of Scientific and Research Publications</i> (2013), Vol. 3, Issue 3, pages 1-9. Sanghani C. R., Acharya G. D., "A review of research on improvement and optimization of performance measures for electrical discharge machining", <i>Int. Journal of Engineering Research and Applications</i> (2014), Vol. 4, Issue 1(Version 2), page 433-450. Bergaley Ajeet, Sharma Narendra. "Optimization of electrical and non electrical factors in EDM for machining die steel using copper electrode by adopting Taguchi technique" <i>International Journal of Innovative Technology and Exploring Engineering</i> (2013), Vol. 3, Issue 3, pages 44-48. Singh H., Garg R., "Effects of process parameters on material removal rate in WEDM", <i>Journal of Achievements in Material and Manufacturing Engineering</i> (2009), Vol. 32, Issue 1, pages 70-74. 			5-8
	Authors:	Neha Verma		
	Paper Title:	A Present Day Android Technology Security Analysis		
3.	<p>Abstract: The important motive is to analyze the security of Android phones. Smartphone usage is increasing with a wide and unlimited variety of applications. Some applications are critical as banking and users are not known to the future risks involved with these android applications. Android adaptation percentage is increasing fast in this modern epoch. Android has also beaten windows. In this paper, Android security has been analyzed considering penetration testing. We have considered the popular tools for testing the security in the suite of TCP/IP. The paper includes a</p>			9-11

	<p>discussion about conclusion that is the android secure or not and up to what extent we can trust using its applications. This work is worthful and useful for researchers who use smartphones having android technology in a critical environment.</p> <p>Keywords: Android, Penetration testing, Smartphones, Linux, Vulnerability</p> <p>References:</p> <ol style="list-style-type: none"> 1. Consumers Now More Likely to Buy Androids Than iPhones, http://www.marketforce.com/2011/02/consumers-now-more-likely-to-buy-androids-than-iphones/, Accessed on February, 2011. 2. Gold, S., "Get your head around hacker psychology [InformationTechnology cyber-security]," Engineering & Technology, vol.9, no.1, pp.76,80, Feb. 2014 3. Shanmugam, J.; Ponnaivaikko, M., "Risk mitigation for cross site scripting attacks using signature based model on the server side," Computer and 4. Computational Sciences, 2007. IMSCCS 2007. Second International Multi- Symposiums on , vol., no., pp.398,405, 13-15 Aug. 2007 5. Special Publication 800-115, Technical Guide to Information Security Testing and Assessment, September 200 (replaces SP800-42), Accessed on March, 2011. 6. Kuzmanovic, N.; Maruna, T.; Savic, M.; Miljkovic, G.; Isailovic, D., "Google's android as an application environment for DTV decoder system," Consumer Electronics (ISCE), 2010 IEEE 14th International Symposium on, vol., no., pp.1.5, 7-10 June 2010 7. Yong-Hua Cheng; Wen-Kuang Kuo; Szu-Lin Su, "An Android system design and implementation for Telematics services," Intelligent Computing and Intelligent Systems (ICIS), 2010 IEEE International Conference on , vol.2, no., pp.206,210, 29-31 Oct. 2010 8. Xueliang Zhao; Dan Tian, "The architecture design of streaming media applications for Android OS," Software Engineering and Service Science (ICSESS), 2012 IEEE 3rd International Conference on, vol., no., pp.280,283, 22-24 June 2012 9. Wei Pan; Weihua Li, "A Penetration Testing Method for E-Commerce Authentication System Security," Management of e-Commerce and e Government, 2009. ICMECG '09. International Conference on, vol.,no., pp.449,453, 16-19 Sept. 2009 10. Information about TCP/IP port assignments, http://support.microsoft.com/kb/174904, Accessed on February 2011. 11. www.sans.org/reading-room/whitepapers/auditing/port-scanning-techniquesdefense-70 12. http://condor.depaul.edu/jkristof/technotes/tcp.html 13. Jinhua Liu; Wenbo Pan; Jiahui Hu; Xianwei Zhou; Jianwei An, "Research of secure ecosystem based on Android platform," Cyberspace Technology (CCT2013), International Conference on , vol., no., pp.375,379, 23-23 Nov. 2013 14. https://gupea.ub.gu.se/bitstream/2077/27864/1/gupea_2077_27864_1.pdf 					
4.	<table border="1"> <tr> <td>Authors:</td> <td>Sheila Mahapatra, Aman Jain, Divyanshu Singh</td> </tr> <tr> <td>Paper Title:</td> <td>PLC-Based Home Automation System</td> </tr> </table> <p>Abstract: This paper is projected as an overview of home automation system. The aim is to introduce in brief the fundamental theory, main and practical results of home automation. The designed control module comprised of software and hardware. The correct incentive for applying automation is to increase productivity and quality that is possible with current human labour levels so as to realize economies of scale and realize predictable quality levels. Home automation identifies a rising practice of features in residential dwellings and increased automation of household appliances, particularly through electronic and electrical means that allow for impractical things , highly expensive or simply not possible in recent past decades.</p> <p>Keywords: Home automation, Programmable Logic Controller (PLC), RSLinx, RSLogix500</p> <p>References:</p> <ol style="list-style-type: none"> 1. Xiaohu, G. and Z. Guangxi, 2006. Empowering ubiquitous services in next-generation smart homes. Inform. Technol. J., 5: 64-69. 2. en.wikipedia.org/wiki/Programmable_logic_controller. 3. plc-solutions.blogspot.in/p/blog-page_27.html. 4. L.A. Bryan, E.A. Bryan, 1997. Programmable controllers: theory and implementation. 1: 5 5. W. Bolton, 2009. Programmable Logic Controllers. 5:113. 	Authors:	Sheila Mahapatra, Aman Jain, Divyanshu Singh	Paper Title:	PLC-Based Home Automation System	12-15
Authors:	Sheila Mahapatra, Aman Jain, Divyanshu Singh					
Paper Title:	PLC-Based Home Automation System					
5.	<table border="1"> <tr> <td>Authors:</td> <td>Parveen Kr. Saini, Mukesh Verma</td> </tr> <tr> <td>Paper Title:</td> <td>Experimental Investigation of Wire-EDM Process Parameters on MRR of Ti-6al-4v Alloy</td> </tr> </table> <p>Abstract: The objective of the present work was to investigate the effect of the wire electrical discharge machining process parameters on material removal rate of titanium alloy using Taguchi approach. A brass wire of 250µm was applied as a tool electrode to cut the specimen. L36 mixed orthogonal array (21×38) has been selected for experimentation under different variables like dielectric conductivity, pulse width, time between pulses, maximum feed rate, servo control mean reference voltage, short pulse time, wire feed rate, wire mechanical tension and injection pressure. The predicted optimal setting of process parameters for material removal rate has been obtained and analyzed by using Taguchi method. The significant process parameters have also been identified and their effects on material removal rate have been studied in detail. The predicted value for MRR at optimal parameter setting is 28.483mm³/min and the experimental average value for MRR at optimal parameter setting is 27.584mm³/min. So the above mathematical prediction for MRR using MINITAB 15 is validated by confirmation experiment with percentage error of 3.25%.</p> <p>Keywords: Titanium alloy, Material removal rate, Taguchi approach, Wire-EDM</p> <p>References:</p> <ol style="list-style-type: none"> 1. Lok, Y.K. and Lee, T.C. (1997), "Processing of advanced ceramics using the wire-cut EDM process", Journal of Materials Processing Technology, 63, 839-843. 2. Kuriakose, S., Mohan. K, and Shunmugam, M. S. (2003), "Data mining applied to wire-EDM process", Journal of Material Processing and Technology, 142,182-189. 3. Swarup S. Mahapatra, Amar Patnaik., "Parametric Optimization of Wire Electrical Discharge Machining (WEDM) Process using Taguchi Method", Journal of Brazil society of mech. Sci. & Eng, Vol. 28, No. 4, December 2006, PP 422-429. 	Authors:	Parveen Kr. Saini, Mukesh Verma	Paper Title:	Experimental Investigation of Wire-EDM Process Parameters on MRR of Ti-6al-4v Alloy	16-20
Authors:	Parveen Kr. Saini, Mukesh Verma					
Paper Title:	Experimental Investigation of Wire-EDM Process Parameters on MRR of Ti-6al-4v Alloy					

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Authors:	Deepti Jhaman Punjabi, Ajitkumar Khachane, Ranjana Gite	
Paper Title:	Remote Sensing Image Retrieval using Semantic Mining	
6.	<p>Abstract: Understanding of images continues to be one of the most exciting and rapidly-growing research areas in various fields of technology. The recent advancements in hardware and telecommunication technologies like satellite communication in combination with the ongoing web proliferation have boosted growth of digital visual content on a large scale. However, this rate of growth has not been matched by the simultaneous improvement of technologies to support efficient image analysis and their retrieval. As a result, the overflow of available visual content resulted in large number of users facing hindrance in accessing information of the appropriate visual content. Moreover, with the immense number of diverse application areas that have emerged, which rely solely on image processing systems, has further revealed the tremendous potential for effective use of visual content through intelligent analysis. Better access to image databases, enhanced surveillance and authentication support systems, content filtering, adaptation and transcoding services, improved human and computer interaction, etc. are among the several application fields that can benefit from semantic image analysis or semantic mining. In this, images from desired database have been subjected to various steps involved in processing of images like pre-processing, segmentation, region level feature extraction and semantic mining. Satellite images are used to monitor the remotely sensed geographic area under consideration. Pre-processing involves steps where low level features are easily obtained using content based image retrieval scheme. Semantic mining technique is used to obtain other high level features for better image retrieval. Furthermore, region based segmentation allows systematic decoding of visual information and quantization based on different color intensities involved in the image. In this segmentation is performed based on the proposed JSEG (J Segmentation) algorithm. A probabilistic method will be used to mine the relationship among semantic features, regions, and images for region based feature extraction. Finally the Expectation Maximization method is used to analyze the relationship and extract the latent semantic concepts. This involves implementation of this approach on a dataset consisting of thousands of satellite images to obtain a high retrieval precision, thus solving our purpose.</p> <p>Keywords: Segmentation, image retrieval, object-based image analysis, remote sensing (RS) image,</p> <p>References:</p> <ol style="list-style-type: none"> 1. Aksoy S, Koperski K, Tusk C, Marchisio G, Tilton JC: Learning Bayesian classifiers for scene classification with a visual grammar. IEEE Trans Geosci Remote Sens 2005, 43(3):581-589. 2. Bimbo AD: Visual Information Retrieval Morgan Kaufmann Publishers, Inc., San Francisco, CA; 1999. 3. Vasconcelos N: From pixels to semantic spaces: advances in content based image retrieval. Computer 2007, 40(7):20-26. 4. Smith JR, Chang SF: Automated binary texture feature sets for image retrieval. In IEEE International Conference on Acoustics, Speech, and Signal Processing, Volume 4. Atlanta, GA, USA; 1996:2239-2242. 5. Chun YD, Kim NC: Content-based image retrieval using multire solution color and texture features. IEEE Trans Multimedia 2008, 10(6):1073-1084. 6. Ferecatu M, Boujemaa N: Interactive remote-sensing image retrieval using active relevance feedback. IEEE Trans Geosci Remote Sens 2007, 45(4):818-826. 7. Huang X, Zhang LP, Li PX: Classification and extraction of spatial features in urban areas using high resolution multispectral imagery. IEEE Trans Geosci Remote Sens Lett 2007, 4(2):260-264. 8. Zhang Ji, Hsu, Mong, Lee, Image Mining: Issues, Frameworks And Techniques, Proceedings of the Second International Workshop on Multimedia Data Mining (MDM/KDD'2001), in conjunction with ACM SIGKDD conference. San Francisco, USA, August 26, 2001 9. L. Shafarenko, M. Petrou, and J. Kittler, "Automatic watershed segmentation of randomly textured color images", IEEE Trans. on Image Processing, vol. 6, no. 11, p. 1530-44, 1997. 10. J. Shi and J. Malik, "Normalized cuts and image segmentation", Proc. of CVPR, p. 731-37, 1997. 11. S. Belongie, et. al., "Color- and texture-based image segmentation using EM and its application to content-based image retrieval", Proc. of ICCV, p. 675-82, 1998. 12. M. Borsotti, P. Campadelli, and R. Schettini, "Quantitative evaluation of color image segmentation results", Pattern Recognition letters, vol. 19, no. 8, p. 741-48, 1998. 13. Y. Delignon, et. al., "Estimation of generalized mixtures and its application in image segmentation", IEEE Trans. on Image Processing, vol. 6, no. 10, p. 1364-76, 1997. 14. Haralick RM: mobile robots, Master thesis," Brazil, 2011. 15. Y. Deng, B. Manjunath, and H. Shin, "Color image segmentation," Conference on Computer Vision and Pattern Recognition, IEEE Computer Society, vol. 2, pp. 446-451, 1999b. 	21-24
7.	<p>Authors: M. A. Modibbo, A. Aliyu, N. I. Medugo, I. A. Macjoe</p> <p>Paper Title: Surveying and Appraising the Impact of Oil Production Activities on Ogoniland, Niger-Delta</p> <p>Abstract: Crude oil exploration areas in Nigeria is found predominantly in marine environment of coastal areas</p>	25-28

	<p>which are fragile, vulnerable and complex containing critical habitat as well as valuable resources of great socio economic significance. Oil spill activities are endemic mostly in the Niger Delta Region of Nigeria; this is because of the oil production activities take place in the area and intense environmental degradation. Thus, this paper aimed at appraising the impact of oil production activities on the environment of Ogoniland and also examines the socioeconomic impact on the people. A stratified random sampling technique method was adopted for precision of the sample and a total number of 120 respondents were selected from the area of study and questionnaires were administered among them. The data collected were analyzed using simple descriptive statistics which include the use of frequencies and percentages. The findings of this paper revealed that the externalities of oil production have resulted in profound adverse impacts on traditional lifestyles and livelihood patterns in the study area where unchecked oil exploration and exploitation had taken place for the past forty years. Therefore, this paper suggests the use of abatement procedures and environmentally sound and cleaner technologies for oil exploration and exploitation in order to mitigate/minimize these negative impacts and enhance the positive impacts to achieve a sustainable healthy environment.</p> <p>Keywords: exploitation, exploration, Environmental pollution, Niger-Delta and Ogoniland.</p> <p>References:</p> <ol style="list-style-type: none"> 1. B. Richard, Ogoni: Report of the UNPO mission to investigate the situation of the Ogoni of Nigeria., The Hague: unrepresented Nation and people Organization 1995 pp 17-26. 2. N.N. Kalu, The History of crude oil Marketing in Nigeria, Journal of NNPC Lagos 1999 vol. 1 (2) 3. N.B. Labrosi, "The Effects of Oil on the Nigeria Niger Delta Ibadan," Unpublished . 4. NNPC International Seminar Lagos Nigeria, 1981. 5. S. P. Legborsi, "Minority Rights, Development and Migration-The Case of the Ogoni People" Unpublished. 6. D. Moffat. and O. Linden, "pollution and the impact of the oil industry in Ambio", Journal of Human Environment, to be published. 7. Shell Petroleum Development Company of Nigeria Limited Nigeria brief the Environment, 1995 8. O. S. Olusi, Nigerian Oil Industry and the Environment, NNPC, Proceedings of the 1981 9. Petroleum (Drilling and Production) Regulations 42 and the Associated Gas Reinjection Act, cap 26, Laws of the Federation of Nigeria 1990. 					
8.	<table border="1"> <tr> <td>Authors:</td> <td>Amit Kumar Bhadrawat, Sourabh Sharma</td> </tr> <tr> <td>Paper Title:</td> <td>BIST based can Bus Control System Implemented into FPGA</td> </tr> </table> <p>Abstract: Electronics components in many application required maximum level of fault tolerance and high reliability . Application like avionic, railway ,deep space mission can serve as an example of these applications. In these applications, electronics components are exhibited to the environment conditions, from among them especially cosmic radiation can have an undesired and destructive effect. In this paper,the design and implementation of BIST based CAN bus control system into FPGA is described. The bus control system uses CAN Aerospace application protocol .the fault tolerant features of the developed system are improved by BIST architecture. Then, experiments With SEU injection into the FPGA configuration memory with both non-TMR and BIST architectures are described, the results presented and evaluated.</p> <p>Keywords: CAN bus, BIST, fault, fault tolerant, FPGA, TMR.</p> <p>References:</p> <ol style="list-style-type: none"> 1. Microchip Technology Inc, "MCP2515 - Stand-Alone CAN Controller with SPI Interface," November 2005. 2. Robert Bosch GmbH, "CAN Specification 2.0," BOSCH, Stuttgart, Technical specification, 1991. 3. Michael Stock, "CANAerospace - Interface specification for airborne CAN applications V 1.7," Stock Flight Systems, 82335 Berg/Farchach, 4. G. Asadi, S. G. Miremadi, H. R. Zarandi, and A. Ejlali, "Evaluation of fault-tolerant designs implemented on sram-based fpgas," in Proceedings of the 10th IEEE Pacific Rim International Symposium on Dependable Computing (PRDC'04). Washington, DC, USA: IEEE Computer Society, 2004, pp. 327-332. 5. J. A. Cheatham, J. M. Emmert, and S. Baumgart, "A survey of fault tolerant methodologies for fpgas," ACM Trans. Des. Autom. Electron. Syst., vol. 11, no. 2, pp. 501-533, 2006. 6. Emmert j. and Bhatia D.K. 1997 "Partial reconfiguration of FPGA mapped design with application for fault tolerance and yield enhancement.in proceedings of the 7th international workshop on field prommeble logic and application 141-150. 7. Fussele D.and vaema p. 1982.fault tolerance wafer scale architector for FPGA.in proceeding of the 9th annual symposium on computer architecture 190-198. 8. Green J.W. and gamal A.E. 1984 configuration of FPGA arrays in the presence of defect 4(oct) 697-717. 	Authors:	Amit Kumar Bhadrawat, Sourabh Sharma	Paper Title:	BIST based can Bus Control System Implemented into FPGA	29-33
Authors:	Amit Kumar Bhadrawat, Sourabh Sharma					
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9.	<table border="1"> <tr> <td>Authors:</td> <td>Vipin Venugopal, Deborah Thomas, Arya Prasad</td> </tr> <tr> <td>Paper Title:</td> <td>Indian Currency Recognizer and Counter System</td> </tr> </table> <p>Abstract: The invention of ATM machine marked a revolutionary change in the Banking sector. It made the money withdrawal an easier and flexible task. This changed the acronym of ATM from Automated Teller Machine to Any Time Money. This popularity was gained only with a single feature WITHDRAW. It is difficult to deposit the money to a Bank account through the traditional method of going to the bank, writing the slip, standing in the queue and depositing the money. So, what if DEPOSIT is also made possible in an ATM? As per the Reserve Bank of India (RBI) data, cash in the system (currency with people) stands at Rs. 11,64,450crore as on September 6, 2013. Approximately 10 per cent of the economy is cash with people. So, if a part of that cash comes back into the system, that itself puts more resources with the banks and the country would benefit. Today, bank branches close at 4 or 5 p.m. whereas most of India's retail trade happens in the evening. So, banks need to have the ability to set up cash deposit machines. We propose a system that can not only accept bank notes, but also detect the presence of counterfeit notes, separate notes based on genuineness and denomination, and give the total amount deposited; and hence provide a highly useful extension to existing ATMs and a secure way of cash deposits.</p> <p>Keywords: Image processing, Embedded System, Mechatronic, Counterfeit detection, Indian currency, currency</p>	Authors:	Vipin Venugopal, Deborah Thomas, Arya Prasad	Paper Title:	Indian Currency Recognizer and Counter System	34-37
Authors:	Vipin Venugopal, Deborah Thomas, Arya Prasad					
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	recognition, correlation, microcontroller.	
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Authors:	N. V. Subba Rao, G. Kesava Rao, S. Sivanaga Raju
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Paper Title:	Tracing based Loss Allocation to Generators in Deregulated Power Systems
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Abstract: Deregulation is the major trend in the electric power industry throughout the world. The main focus in deregulated system operation is to optimize the system welfare by introducing competition, mainly, among generators. The grid operator is required to know how the power offered by the generators is reaching the load; for which the power flow is to be traced along the lines. Tracing of electricity plays very important role in the open market, as it increases the clarity in open market and promote efficient system. In this paper, tracing based loss allocation methodology is developed to allocate the transmission losses to generators alone. This method works based on the principle of power flow tracing which in turn uses proportional sharing principle. The effectiveness of the proposed loss allocation methodology is tested on standard IEEE-5 bus, IEEE-30 bus and real time Indian-24 bus systems and the loss allocation results are also compared with the existing Bialek method.

Keywords: Proportional sharing principle, Power flow tracing, Loss allocation, Bialek method, Tracing based coefficients.

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Authors:	Tapas Chakrabarti, Subir Kumar Sarkar
Paper Title:	VWF Tool based T-J Solar Cell Modeling and Analyzing the Performance

Abstract: The solar cell structure is an important factor for realization of better efficiency of a solar cell in conversion of optical source in to electrical source. Using more efficient solar cell, the production cost of solar power can be minimized. Multi-junction Tandem Solar Cells are most effective in conversion of solar energy in to electrical energy. One triple junction III-V tandem solar cell is fabricated in virtual wafer fabrication lab (VWF) in this paper. Three numbers of multi-junction solar cells are designed and fabricated with the III-V materials and stacked on each other with the sequence of descending order of band gap energy and these three cells are inter connected with two tunnel diode. The mesh structure of this fabrication is done in auto-mesh mode which creates cylinders in mesh. The efficiency of this Triple Junction (T-J) solar cell is achieved 30.671% and the Fill Factor of this cell is derived 77%.

Keywords: Triple Junction (T-J), Virtual Wafer Fabrication (VWF), Photovoltaic (PV), Current- Voltage curve (I-V curve), Fill Factor (FF), Air Mass ratio (AM), Metal organic vapor phase epitaxial (MOVPE).

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Authors:	S. Arun, K. Velmurugan, S. Shankar Balaji
Paper Title:	Experimental Studies on Drying Characteristics of Coconuts in a Solar Tunnel Greenhouse Dryer
Abstract:	A natural convection solar tunnel greenhouse dryer was designed and fabricated for studying the drying characteristics of coconuts in Pollachi region of Tamil Nadu. Three experimental runs with 5000 coconuts were

	<p>carried out in the dryer during the month of March 2014. The drying time and the product quality were the main deciding performance parameters of the dryer which are studied in comparison with the traditional drying method (open sun drying). It was found that the coconuts which has an initial moisture content of 53.84% (w.b.) were dried to final moisture content of 7.4% (w.b.) in the solar tunnel greenhouse dryer for a time period of 56 hours whereas the open sun drying method took 147 hours for the same. Also, the quality of dried coconuts in the solar tunnel greenhouse dryer was found to be free from fungal and bacterial infections which prove the possibility of production of superior quality coconuts from the dryer than that of open sun drying method.</p> <p>Keywords: Coconuts, drying time, moisture content, open sun drying, quality, solar tunnel greenhouse dryer.</p> <p>References:</p> <ol style="list-style-type: none"> 1. D. Jain, G. N. Tiwari, "Effect of greenhouse on crop drying under natural forced convection. II. Thermal modeling and experimental validation, <i>Energy Conversion and Management</i>, 2004, (45), pp. 2777–2793. 2. D. Jain, G. N. Tiwari, "Effect of greenhouse on crop drying under natural forced convection. I. Evaluation of convective mass transfer coefficient, <i>Energy Conversion and Management</i>, 2004, (45), pp. 765-783. 3. Ayensu & V. Asiedu-Boudzie, "Solar drying with convective self-flow and energy storage", <i>Solar & Wind Technology</i>, 1986, (3), pp. 273-279 4. M. Mohanraj and P.Chandrasekar, "Comparison of drying characteristics and quality of copra obtained in a forced convection solar drier and sun drying", <i>Journal of Scientific and Industrial Research</i>, 2008, vol. 67, pp.381-385. 5. El-Sebaai et al., "Experimental investigation of an indirect type natural convection solar dryer", <i>Energy Conversion and Management</i>, 2002, (43), pp. 2251-2266. 6. M. Condori, R. Echazu, & L. Saravia, "Solar drying of sweet pepper and garlic using the tunnel greenhouse drier", <i>Renewable Energy</i>, 2001, vol. 22, pp. 447-460. 7. W. A. M. McMinn & T. R. A. Magee, "Principles methods and applications of the convective drying of foodstuffs", <i>Food Bio- production Process</i>, 1999; vol. 77(3), pp.175-93. 8. H. P. Garg & R. Kumar, "Studies on semi-cylindrical solar tunnel dryers: Thermal performance of collector", <i>Applied Thermal Engineering</i>, 2000, vol. 20, pp. 115 – 131. 9. J. P. Fohr & G. Arnaud, " Grape drying: From sample behaviour to the drier project, <i>Drying Technology</i>", 1992, vol. 10(2), pp. 445-465. 10. R. Rachmat & K. Horibe, "Solar heat collector characteristics of a fibre reinforced plastic drying house", <i>Transactions of ASAE</i>, 1999, vol. 42(1), pp. 149-157. 11. H. P. Garg & R. Kumar, "Studies on semi-cylindrical solar tunnel dryers: Thermal performance of collector", <i>Applied Thermal Engineering</i>, 2000, vol. 20, pp. 115 –131. 12. Doymaz, "Air-drying characteristics of tomatoes", <i>Journal of Food Engineering</i>, 2007, vol. 78(4), pp. 1291-1297. 13. K. Sacilik, R. Keskin, & A. K. Elicin, "Mathematical modelling of solar tunnel drying of thin layer organic tomato", <i>Journal of Food Engineering</i>, 2005. 14. C. Ertekin & O. Yaldiz, "Drying of eggplant and selection of a suitable thin layer drying model", <i>Journal of Food Engineering</i>, 2004, vol. 63(3), pp. 349-359. 	
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Authors:	S. Arun, S. Shankar Balaji, P. Selvan
Paper Title:	Experimental Studies on Drying Characteristics of Coconuts in a Solar Tunnel Greenhouse Dryer Coupled with Biomass Backup Heater

13.	<p>Abstract: A natural convection solar tunnel greenhouse dryer coupled with biomass backup heater was designed and developed for studying the drying characteristics of coconuts in Pollachi region of Tamil Nadu. Three trails of loading 5000 coconuts in the dryer were carried out during the month of January, 2014. The biomass backup heater was used after 5PM where there would be no sufficient solar radiation and was loaded with the remains of coconut such as coconut fronts, coconut husk and coconut shells which could be used as a fuel for biomass heater. The drying time and the product quality were the main deciding performance parameters of the dryer which are studied in comparison with the traditional drying method (open sun drying). It was found that the coconuts which has an initial moisture content of 53.84% (w.b.) were dried to final moisture content of 7.003% (w.b.) in the solar tunnel greenhouse dryer for a time period of 44 hours whereas the open sun drying method took 148 hours for the reduction of moisture content of the coconuts to the same level. Also, the superior quality coconuts can be produced from the solar tunnel greenhouse dryer since the dryer is free from contamination, dust & dirt, damage by birds and infections by bacteria and fungus.</p> <p>Keywords: Biomass backup heater, coconuts, drying time, moisture content, open sun drying, product quality, solar radiation, solar tunnel greenhouse dryer.</p> <p>References:</p> <ol style="list-style-type: none"> 1. M. Condori, R. Echazu, & L. Saravia, "Solar drying of sweet pepper and garlic using the tunnel greenhouse drier", <i>Renewable Energy</i>, 2001, vol. 22, pp. 447-460. 2. D. S. Sogi, U.S. Shivhare, S.K. Garg, & A.S. Bawa, "Water sorption isotherm and drying characteristic of tomato seeds", <i>Biosystems Engineering</i>, 2003, vol. 84, pp. 297-301. 3. C. Tiris, N. Özbalta, M. Tiris, & I. Dinçer, "Experimental testing of a new solar dryer", <i>International Journal of Energy Research</i>, 1994, vol. 18, pp. 483-490. 4. Gungor & N. Ozbalta, " Design of a greenhouse for solar drying of sultana grapes and experimental investigation on it", <i>International Conference on Thermal Engineering and Thermogrammetry (THERMO)</i>, 18-20 June 2003, Budapest, Hungary. 5. B. K. Bala, M. R. A. Mondol, B. K. Biswas, B. L. Das Chowdury, & S. Sanjai, "Solar drying of pineapple using solar tunnel drier", <i>Renewable Energy</i>, 2003, vol. 28, pp.183-190. 6. H. N. Yilmaz, N. Ozbalta, & A. Gungor, "Performance analysis of a solar cabinet drier for tomatoes", <i>International Conference on Agricultural Mechanisation and Energy</i>, 26 – 27 May 1999, Adana, Turkey 7. Y. M. Gallali, Y. S. Abujnah, & F. K. Bannani, "Preservation of fruits and vegetables using solar dryer: a comparative study of natural and solar drying. III; chemical analysis and sensory evaluation data of the dried samples (grapes, figs, tomatoes and onions)", <i>Renewable Energy</i>, 2000, vol. 19, pp. 203-212. 8. I. Doymaz, & M. Pala, "Hot-air drying characteristics of red pepper", <i>Journal of Food Engineering</i>, 2002, vol. 55(4), pp. 331-335. 9. K. Sacilik, R. Keskin, & A. K. Elicin, "Mathematical modeling of solar tunnel drying of thin layer organic tomato", <i>Journal of Food Engineering</i>, 2005. 10. D. Jain, G. N. Tiwari, "Effect of greenhouse on crop drying under natural forced convection. II. Thermal modeling and experimental 	56-60
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16.	M. Mohanraj and P.Chandrasekar, “Comparison of drying characteristics and quality of copra obtained in a forced convection solar drier and sun drying”, Journal of Scientific and Industrial Research, 2008, vol. 67, pp.381-385.	
	Authors:	S. Arun, S. Ayyappan, V. V. Sreenarayanan
	Paper Title:	Mathematical Modeling of Solar Tunnel Greenhouse Dryer for Describing the Drying Kinetics of Copra
14.	<p>Abstract: The most important aspect of drying technology is the mathematical modelling of the drying processes ad equipments. Since moisture ratio and dryer temperature are the deciding parameters for the modelling of a natural convection solar tunnel greenhouse dryer, a mathematical modeling analysis was carried out in the solar tunnel greenhouse drier with biomass backup heater under full load conditions during the month of January 2014. About 5000 coconuts were dried in the dryer from 53.84% initial moisture content to about 7.003% final moisture content for 44 hours and the moisture ratio of the coconuts were calculated for every one hour interval. Ten different modelling were used for determining the theoretical moisture ratio of the coconuts. From the analysis, it was found that the Page method is the best method available for determining the drying characteristics of coconuts since the χ^2 and RMSE values are found to be very minimum.</p> <p>Keywords: Biomass backup heater, coconuts, drying, mathematical modelling, moisture content, moisture ratio, solar tunnel greenhouse dryer.</p> <p>References:</p> <ol style="list-style-type: none"> 1. E. Kavak Akpınar and Y. Bicer, Y. “Mathematical modelling of thin layer drying process of long green pepper in solar dryer and under open sun”, Energy Conversion and Management, 2008, vol.49, pp.1367-1375. 2. Anil Kumar and G. N. Tiwari, “Thermal modelling of a natural convection greenhouse drying system for jaggery: An experimental validation”, Solar Energy, 2006, vol. 80, pp.1135-1144. 3. R. K. Goyal, A. R. P. Kingsly, M. R. Manikantan and S. M. Ilyas “Mathematical modelling of thin layer drying kinetics of plum in a tunnel dryer”, Journal of Food Engineering, 2007, vol.79, pp.176-180. 4. P. C. Panchariya, D. Popovic, and A. L. Sharma, “Thin layer modelling of black tea drying process”, Journal of Food Engineering, 2002, vol.52, pp.349-357. 5. E. Kavak Akpınar, Y. Bicer, and F. Cetinkaya, “Modelling of thin layer drying of parsley leaves in a convective dryer and under open sun”, Journal of Food Engineering, 2006, vol.75, pp.308-315. 6. K. Sacilik, “Effect of drying methods on thin-layer drying characteristics of hull-less seed pumpkin (Cucurbita pepo L.)”, Journal of Food Engineering, 2007, vol. 79 (1), pp. 23-30. 7. T. Togrul and D. Pehlivan, “Modelling of thin layer drying kinetics of some fruits under open-air sun drying process”, Journal of Food Engineering, 2004, vol. 65, pp. 413-425. 8. Midilli, H. Kucuk and Z. Yapar, “A new model for single layer drying”, Drying Technology, 2002, vol. 20 (7), pp. 1503-1513. 9. O. Yaldiz, C. Ertekin & H. I. Uzun, “Mathematical modelling of thin layer solar drying of sultana grapes”, Energy, 2001, vol. 26, pp. 457-465. 10. Doymaz, “Sun drying of figs: an experimental study”, Journal of Food Engineering, 2005, vol. 71 (4), pp. 403-407. 11. E. K. Akpınar, Y. Bicer and A. Midilli, “Modeling and experimental study on drying of apple slices in a convective cyclone dryer”, Journal of Food Process Engineering, 2003, vol. 26(6), pp. 515-541. 12. H. O. Menges and C. Ertekin, “Thin layer drying model for treated and untreated stanley plums”, Energy Conversion and Management, 2006, vol. 47 (15-16), pp. 2337-2348. 13. T. Günhan, V. Demir, E. Hancioglu and A. Hepbasli, “Mathematical modelling of drying of bay Leaves”, Energy Conversion and Management, 2005, vol. 46 (11-12), pp. 1667-1679. 14. Midilli and H. Kucuk, “Mathematical modelling of thin layer drying of pistachio by using solar energy”, Energy Conversion and Management, 2003, vol. 44, pp. 1111-1122. 15. P. S. Madamba, R. H. Driscoll, & K. A. Buckle, “The thin layer drying characteristics of garlic slices”, Journal of Food Engineering, 1996, vol. 29, pp. 75-97. 16. K. Sacilik, R. Keskin, & A. K. Elicin, “Mathematical modeling of solar tunnel drying of thin layer organic tomato”, Journal of Food Engineering, 2005. 17. Gungor & N. Ozbalta, “ Design of a greenhouse for solar drying of sultana grapes and experimental investigation on it”, International Conference on Thermal Engineering and Thermogrammetry (THERMO), 18-20 June 2003, Budapest, Hungary. 18. Kaya, O. Aydin, C. Demirtas, & M. Akgun, “An experimental study on the drying kinetics of quince”, Desalination, 2007a, vol. 212, pp. 328–343. 19. A. Kaya, O. Aydin, C. Demirtas, "Drying kinetics of red delicious apple", Biosystems Engineering, 2007b, vol. 96, 517-524. 20. U. S. Pal & A. Chakraverty, “Thin layer convection drying of Mushrooms”. Energy Conversion and Management, 1997, vol. 38(2), pp. 107-113. 21. P. N. Sarsavadia, R. L. Sawhney, D. R. Pangavhane & S. P. Singh, “Drying behaviour of brined onion slices”, Journal of Food Engineering, 1999, vol. 40, pp. 219-226. 22. C. Ertekin & O. Yaldiz, “Drying of eggplant and selection of a suitable thin layer drying model”, Journal of Food Engineering, 2004, vol. 63 (4), pp. 349-359. 	61-67
	Authors:	Amirhossein Soltani Afarani, Gholamreza Ghodrati Amiri, Seyed Ali Razavian Amrei
	Paper Title:	Peak Ground Acceleration on Bedrock and Uniform Seismic Hazard Spectra for Different Regions of Golpayegan, Iran
15.	<p>Abstract: The present paper was done under the title of peak ground acceleration(PGA) on bedrock and uniform seismic hazard spectra(UHS) for different regions of Golpayegan city. A set of seismic sources, historical and instrumental seismicity data within the radius of 200 kilometers from the city center since the year 1316 until now has been collected and used. Kijko[2000] method has been applied for estimating the seismic parameters considering lack of suitable seismic data, inaccuracy of the available information and uncertainty of magnitude in different</p>	68-73

	<p>periods. The calculations were performed by using the logic tree method, Five weighted attenuation relationships were used; including Ghodrati et al (2007), 0.3; Ambraseys et al (1996), 0.2 ; Campbell-Bozorgnia (2000), 0.15 ; Campbell-Bozorgnia (2009), 0.15 and Akkar & Bommer(2010), 0.2. Furthermore in order to determine the seismic spectra based on weighted attenuation spectral relationships, and also for the reason of being spectral and more suitable with the conditions of the zone, Ambraseys et al (1996), 0.3 ; Ghodrati et al (2010), 0.3 ; Campbell (1997), 0.2 & Berge-Thierry (2003), 0.2 were used. The SEISRISKIII (1987) software was used to calculate the earthquake hazard. The results of this analysis were submitted including the spectra and maps for 10% and 2% probability of event in 50 years.</p> <p>Keywords: Seismic hazard analysis, Peak Ground Acceleration (PGA), Uniform seismic hazard spectra, uniform spectra, attenuation relations, Golpayegan and Iran.</p> <p>References:</p> <ol style="list-style-type: none"> 1. A.H. Soltani afarani, "Peak Ground Acceleration (PGA) on bedrock and uniform seismic hazard spectra for different regions of Golpayegan city", M.Sc. thesis, Azad University of Shahrekord, Supervised by Prof. Ghodrati Amiri, and Dr. Razavian Amrei, 2014. 2. Nowroozi, "Empirical relations between magnitude and fault parameters for earthquakes in Iran", Bulletin of the Seismological Society of America ,Vol. 75, No. 5, pp. 1327-1338, 1985. 3. International Institute of Earthquake Engineering and Seismology website: http://www.iiées.ac.ir 4. N.N. Ambraseys, and C.P. Melville, A History of Persian Earthquakes, Cambridge University Press, Cambridge, Britain, 1982. 5. "IRCOLD, Iranian Committee of Large Dams "Relationship between Ms and mb," Internal Report, 1994. (in Persian) 6. J.K. Gardaner, L. Knopoff, "Is the sequence of earthquake in southern California, with aftershocks removed, poissonian?", Bulletin of the Seismological Society of America ,Vol. 64, No. 5, pp. 1363-1367, 1974. 7. Kijko, "Statistical estimation of peak regional earthquake magnitude Mmax", Workshop of Seismicity Modeling in Seismic Hazard Mapping, poljce, Slovenia, May, 22-24, 2000. 8. G. Ghodrati Amiri, A. Mahdavian, F. Manouchehri Dana, "Attenuation Relationship for Iran", Journal of Earthquake Engineering, Vol. 11, Issue 4, pp. 469-492, 2007. 9. N.N. Ambraseys, K.A. Simpson and J.J. Bommer. "Prediction of horizontal response spectra in Europe". Earthquake Eng. Struct. Dynam. Vol. 25, pp. 371-400, 1996. 10. Campbell, K. W., & Bozorgnia, Y. 2000 (Nov). New empirical models for predicting near-source horizontal, vertical, and V/H response spectra: Implications for design. In: Proceedings of the Sixth International Conference on Seismic Zonation. 11. [Campbell, K.W. and Bozorgnia, Y., [2009] NGA ground motion model for the geometric mean horizontal component of PGA, PGV, PGD and 5% damper linear elastic response spectra for periods ranging from 0.01 to 10 s. Earthquake Spectra, 24(1), 139-171. 12. Akkar, S. and Bommer, J.J. [2010] Empirical equation for the prediction of PGA, PGV and spectral accelerations in Europe, the Mediterranean region and the Middle East. Seismological Research Letters, 81(2), 195-206. 13. G. Ghodrati Amiri, M. Khorasani, R. Mirza Hesabi, and S.A .Razavian Amrei, "Ground-Motion Prediction Equations of Spectral ordinates and Arias Intensity for Iran", Journal of Earthquake Engineering, Vol. 14, Issue 1, pp. 1-29, 2010. 14. Campbell, K.W. 1997. Empirical near-source attenuation relationships for horizontal and vertical components of peak ground acceleration, peak ground velocity, and pseudo-absolute acceleration response spectra. Seismological Research Letters, 68(1), 154-179. 15. Berge-Thierry, C., Cotton, F., Scotti, O., Anne, D., Pommera, G., and Fukushima, Y., 2003. New empirical response spectral attenuation laws for moderate European earthquakes. Journal of Earthquake Engineering, 7: 193-222. 16. Bender, D.M. Perkins. "SEISRISK-III: A computer program for seismic hazard estimation", US Geological Survey, Bulletin 1772, 1987. 17. IIEES. Seismic Rehabilitation Code for Existing Buildings in Iran, International Institute of Earthquake Engineering and Seismology, Tehran, Iran, 2002. 18. BHRC. Iranian Code of Practice for Seismic Resistant Design of Building, Standard No. 2800, Third Revision, Building and Housing Research Center, Tehran, Iran, 2005. 	
	<p>Authors: Mohammad Javad Ghasemi Dastjerdi, Seyed Ali Razavian Amrei, Gholamreza Ghodrati Amiri</p>	
	<p>Paper Title: Peak Ground Acceleration on Bedrock (PGA) and Uniform Seismic Hazard Spectra (UHS) for Different Regions of Kashan, Iran</p>	
16.	<p>Abstract: The present paper was done under the title of peak ground acceleration (PGA) on bedrock and uniform seismic hazard spectra (UHS) for different regions of Kashan city in two hazard levels. A set of seismic sources, historical and instrumental seismicity data of International Institute of Earthquake authoritative books and websites has been collected, which covers the period of the forth century BC until now. Kijko[2000] method has been applied for estimating the seismic parameters considering lack of suitable seismic data, inaccuracy of the available information and uncertainty of magnitude in different periods. The calculations were performed by using the logic tree method. Five weighted attenuation relations were used ;including Ghodrati et al (2007), 0.3, Akkar & Bommer (2010),0.2, Ambraseys et al (1996),0.2, Campbell-Bozorgnia (2000),0.15 and Campbell-Bozorgnia (2009) ,0.15. Meanwhile in order to determine the seismic spectra based on weighted attenuation spectral relations, and also for the reason of being spectral and more suitable with the conditions of the zone, Ambraseys et al (1996), 0.3, Ghodrati Amiri et al (2010), 0.3, Campbell (1997), 0.2 and Berge-Thierry et al (2003),0.2 were used. The SEISRISK III (1987) software was used to calculate the earthquake hazard. The results of this analysis were submitted including the spectra and maps for 10% and 2% PE in 50 years.</p> <p>Keywords: Seismic hazard analysis, Peak ground acceleration (PGA), Uniform seismic hazard spectra (UHS), Uniform spectra, Attenuation relationships and Kashan.</p> <p>References:</p> <ol style="list-style-type: none"> 1. M.J. Ghasemi Dastjerdi, "Peak Ground Acceleration on Bedrock (PGA) and uniform Seismic Hazard Spectra (UHS) for different Regions of Kashan, Iran", M.Sc. thesis, Azad University of Shahrekord, Supervised by Prof. Ghodrati Amiri, and Dr. Razavian Amrei, 2014. 2. International Institute of Earthquake Engineering and Seismology website: http://www.iiées.ac.ir 3. Nowroozi, "Empirical relations between magnitude and fault parameters for earthquakes in Iran", Bulletin of the Seismological Society of America ,Vol. 75, No. 5, pp. 1327-1338, 1985. 4. N.N. Ambraseys, and C.P. Melville, A History of Persian Earthquakes, Cambridge University Press, Cambridge, Britain, 1982. 5. "IRCOLD, Iranian Committee of Large Dams "Relationship between Ms and mb," Internal Report, 1994. (in Persian) 6. J.K. Gardaner, L. Knopoff, "Is the sequence of earthquake in southern California, with aftershocks removed, poissonian?", Bulletin of the Seismological Society of America ,Vol. 64, No. 5, pp. 1363-1367, 1974. 7. Kijko, "Statistical estimation of peak regional earthquake magnitude Mmax", Workshop of Seismicity Modeling in Seismic Hazard Mapping, 	74-79

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Authors:	V. Giridhar Kumar, V. Pradeep
Paper Title:	Strength Characteristics of Normal Weight Aggregate Concrete with Diatomite Powder as an Admixture

Abstract: Diatomite is a naturally available mineral resource material which contains large amounts of amorphous silica and cristabolite. It is available at a low cost in many areas. It provides a viable alternative admixture to cement in concrete. Investigations on concrete with diatomite as partial replacement of cement are presented in this paper. Results show that 28 - day compressive strength of mix with diatomite is 43.5 MPa at 10 percent partial replacement of cement. The mix shows similar trends for the development of split tensile strength as well as flexural strength. The investigations show that diatomite has a good potential as fine aggregate in concrete construction. It not only reduces the cost of construction but also helps to consume natural mineral resource material for few concrete applications .It is also used as a prime filter material for water treatment processes.

Keywords: Diatomite, Pozzolanas, Natural mineral material, Cement replacement, Mechanical properties of concrete.

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