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Address:
22, First Floor, ShivLoke Phase-IV,
Khajuri Kala, BHEL-Piplani, Bhopal (M.P.)-462021, India
Website: www.blueeyesintelligence.org
Email: director@blueeyesintelligence.org, blueeyes@gmail.com
Cell #: +91-9669981618, **WhatsApp #:** +91-9669981618, **Viber #:** +91-9669981618
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Authors: M. Sazid, M.R. Saharan, T.N. Singh

Paper Title: Enhancement of the Explosive Energy Utilization with the Application of New Stemming Contrivance

Abstract: The effect of confinement on explosive energy utilization in rock blasting was studied by using a new stemming contrivance named SPARSH .To achieve the objectives an experiment blast was carried out using SPARSH. The experiment blast was analysed by high speed video camera. Post blast observations were also conducted to identify the blast results. Results were compared with the conventional stemming applying drill cuttings as stemming material for a part of the experimental blast. It was noticed that application of SPARSH results into increase in the explosive energy retention time, reduce ejection velocity and stemming ejection height. The combined effect of the higher retention time, the reduced stemming ejection height and the lower stemming ejection velocity manifests into a larger component of the explosive energy available for rock breakage which assists into safer economical ore liberation process.

Keywords: stemming contrivance, explosive energy utilisation, energy retention time, stemming ejection velocity, stemming ejection height, high speed imaging.

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Authors: Hemal Lotankar, Srinivas Daketi

Paper Title: Rediscovering Traditional Mughal Fenestrations (16th to 17th Century) in India for Sustainable Architecture

Abstract: Fenestration is an interface between the exterior and interior. The complexities of functions of fenestrations have increased over the period of time. Traditional culture, art and knowledge find no place in this

2.	globalized world. As we embrace new materials and techniques, achieving thermal and visual comfort has become challenging. There is a missing link between the traditional and contemporary architecture of which fenestrations stand as evidence. Energy consumption for air conditioning and lighting can be reduced significantly through appropriate design of fenestrations. There is a need to understand the proper day lighting and natural ventilation and its impact on saving energy in buildings. Therefore, it is necessary to scientifically understand the techniques evolved in the past. The study focuses on understanding and analyzing traditional building fenestrations, which will help in determining the feasibility for its application in contemporary projects. The research highlights fenestrations of 16th-17th century Mughal buildings through literature review and case studies. It explores examples of fenestration designs responsive to the culture of the place and climate thereby achieving thermal comfort. The study provides guidelines to incorporate traditional fenestration designs with a modern approach to overcome the environmental disturbances and retain the cultural identity of the place. **Keywords:** Fenestrations, Mughal Architecture,Climate, Culture **References:** 1. AgarwalA , Jain R.K , Ahuja R (2006) Shekhawati: urbanism in the semi-desert of India A climatic study, India.In 23rd International Plea Conference. 6-8 September 2006. Geneva, Switzerland 2. Soflaee, F., &Shokouhian, M. (2005). Natural Cooling Systems in sustainable traditional architecture of Iran. International Conference "Passive and Low Energy Cooling for the BuiltEnvironment", (pp. 715-719). Santorini. 3. Ashar, B. (2003) Architecture of Mughal India. Cambridge University Press 4. Ali A,(2012) Passive Cooling and Vernacularism in Mughal Buildings in North India: A Sourceof Inspiration for Sustainable Development, Aigarh Muslim University, India 5. Narkhede P,(2010) The Impact of Climatic and Cultural Factors on Openings in TraditionalHouses in Maharashtra, Time, space and people, [Online] pp. 28-41, [Accessed : 25th August 2015] 6. Tipnis A, (2012) 'The Indian Vernacular Architecture'. Vernacular Traditions Contemporary Architecture. The Energy and Resource Institute–TERI. New Delhi. 33-49 7. Sundar N, (2014) Let there be light. The Hindu. 17 October.[Online]. Available from: http://www.thehindu.com[Accessed: 25thAugust 2015] 8. PatidatS, (2014) Changes in Culture and Architecture from Vernacular to Modern: M.P., India.In 30th International Plea Conference. 16-18 December 2014, CEPT University. Ahmedabad 9. www.indarchaeology.org ,Indian Archaeological Society of Indian [Online] [Accessed: 14.11.2015] 10. Krishnan A (2001), 'Climate Responsive Architecture: A Design Handbook for Energy Efficient' [Online] [Accessed: 27 September 2015], New Delhi	**6-12**
3.	**Authors:**	**Abdullah Al Mamun**
	Paper Title:	**Constraints for Bangladeshi RMG Factories to be Compliant**
	Abstract: Now-a-days, readymade garment (RMG) sector is considered as the backbone of the country because of its extended economic growth in the last couple of decades. Among many other challenges, compliance issue of RMG factories is the key requirement for most of the reputed global garments buyers. Compliance ensures all social and environmental standards set up by different organizations. Out of five thousands RMG industries in Bangladesh, some are quite small and their investment capabilities on compliance are not same while compared with large factories. This paper is based on descriptive and inferential research of the compliance procedure of small, medium and large RMG industries. Five point scale system is used in this investigation to do rating of three factories based on nine different issues of compliance. The study shows highest rating in case of large industries among three industries and indicates that the performance on compliance of large factory is comparatively better than that of the medium and small ones. This research work also identified the constraints of the compliance procedure of different RMG factories and suggests the improvement procedure of the factories. The study finally suggests that for the sustainable development of this sector in future, factory owners must need to concentrate on the working environment of the factory, health, safety and security, social issues, labor relations and other areas of compliance and there are also scopes for development of RMG sector in Bangladesh. **Keywords:** BNW, Compliance, COC, RMG, WPC. **References:** 1. http://www.bgmea.com.bd/home/pages/tradeinformation 2. (Retrieved date: 09.11.2015, retrieved time: 12.07 pm) 3. http://www.fashionatingworld.com/new1-2/item/4315-sustainability-a-growing-consciousness-in-fashion-industry.html 4. (Retrieved date: 13.07.2015, retrieved time: 07.10 pm) 5. http://searchdatamanagement.techtarget.com/definition/compliance 6. (Retrieved date: 22.10.2015, retrieved time: 11.05 am) 7. https://www.sba.gov/content/am-i-small-business-concern 8. (Retrieved date: 17.11.2015, retrieved time: 06.13 pm) 9. http://smallbusiness.chron.com/definition-small-medium-scale-industries-15213.html 10. (Retrieved date: 11.09.2015, retrieved time: 03.17 pm) 11. Baral, L.M., Comparative study of compliant & non-compliant RMG factories in Bangladesh, International Journal of Engineering & Technology (IJET-IJENS), Vol.10 (2), pp.119. 12. Rahman, M. A., Hossain, M.S., Compliance practices in garment industries in Dhaka city, Journal of business and technology, vol.5(2),Jjuly-December, 2010.	**13-19**
4.	**Authors:**	**Vijender Singh, Deepak Garg**
	Paper Title:	**Review of Various Algorithms in Graph Mining Based on Search Strategies**

Abstract: Graph mining is an active research area during these days. Graphs have become significant in the modeling of complicated structures such as circuit images, chemical compounds, protein structures, biological networks, social networks, web workflows and XML documents. A common framework is necessary to study various graph mining algorithms and their applications. In this paper, we present a review study of various algorithms based on their graph representation, subgraph generation, algorithm approach, frequency evaluation and search strategy.

Keywords: Subgraphs, Graph Mining, Algorithms

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Authors:	**Anoop Kumar Singh, Sudhir Kumar Srivastava, Vikas Pandey**
Paper Title:	**Load Frequency Control of Multi Area Power System using Different Intelligent Controllers**

Abstract: In power system engineering exact load prediction is difficult task because a continuous load changing in power systems network that disturb the frequency directly. If the frequency is deviate from its limit, there show a severe effect on power system. So load frequency controller (LFC) is designed and if it working properly, the frequency is quickly returned to the normal operating point that means steady state error become zero. There are two types of controllers used in this paper which are Fuzzy controllers and GA-PID (pid controller tuned by genetic algorithm) controllers. The performance of GA-PID controller is quite fast and efficient. The result shows an improved performance in terms of rise time, settling time, steady state error and overshoot. In this paper we use linear single area (thermal) and two area (thermal-thermal) model for simplification. The effectiveness of the proposed controller is confirmed via extensive study using MATLAB/SIMULINK software. Simulation results are carried out by 10% system disturbances in both of one and two areas power system.

Keywords: Fuzzy controller, genetic algorithm, load frequency control, PID controller.

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