International Journal of Innovative Technology and Exploring Engineering

ISSN : 2278 - 3075
Website: www.ijitee.org
Volume-7 Issue-8, MAY 2018
Published by:
Blue Eyes Intelligence Engineering and Sciences Publication Pvt. Ltd.

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1.

Authors: Dara Singh, Rohit Mahajan

Paper Title: TRAP: A New Transmission Range Adjustment Protocol for MANET

Abstract: MANET is combination of mobile nodes which uses multi hop transmission for communication. Due to highly dynamic topology, routing in MANET is challenging task, moreover presence of malicious nodes makes the overall network very insecure. We study both the availability and the duration probability of a routing path that is subject to link failures caused by node mobility. In this paper we studied of Energy Efficient Cluster based routing Protocol and also proposed a Transmission Range Adjustment Protocol (TRAP) algorithmic approach towards energy efficient clustering. The aim of this algorithm is to build energy efficient cluster formation, so that the re- election of cluster head can avoid. TRAP algorithmic approach effectively uses the knowledge of neighborhood to calculate mobility, energy and signal strength of the nodes. The high value of node is elected as cluster head to keep the head alive for long time that further lead to enhance the overall performance of network and reduce the network overhead. The performance of proposed TRAP (Transmission Range Adjustment Protocol) algorithmic approach is analysis under five metrics such as a Network life time, Energy consumption, throughput, delay, packet delivery ratio. In this algorithm, we will find that node which has highest weight and make it as cluster head node for base station and best efficient path.

Keywords: MANET, Clustering, Mobility, Efficiency, TRAP, Routing Protocols, Cluster Head.

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2.

Authors: B. Chandana, M. Durga Rao

Paper Title: Experimental Studies on Self Compacting Concrete with Partial Replacement of Fly Ash and Silica Fume

Abstract: The aim of this study is to evaluate the performance of Fly Ash and Silica Fume (replacement) a mineral admixture in concrete when it is mixed in cement concrete for workability, durability and strength of concrete using OPC (53- grade). Concrete over the past few years suggest that cement replacement materials along with mineral & chemical admixtures can improve the strength, workability and durability characteristics of concrete. The research has focused on developing self-compacting concrete in cooperating relatively large amounts of mineral by products such as Silica Fume and Fly Ash as supplementary cementing materials. This study investigates the performance of concrete mixture in terms of Compressive strength and split tensile strength for 7, 14 and 28 days respectively of M-30 grade concrete. This project deals with the self- compacting concrete where the replacement levels of OPC by Fly Ash were 15%, 20% and 25%, where replacement levels of OPC by Silica Fume were 6%, 9% and 12% by weight. Here in this

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project 1.2% of super-plasticizer was used in all the test specimens for better workability at lower water binder ratio and to identify the sharp effects of Silica Fume and Fly Ash on the properties of concrete. These Concrete specimens were deep cured in water under normal atmospheric temperature.

Keywords: Self Compacting Concrete, Fly ash, Silica fume, Fresh Concrete Properties, Hardened Properties, Compressive Strength, Split tensile Strength.

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3.

Authors:	**M. Veerraju, S. Arunchaitanya**
Paper Title:	**Experimental Study on High Strength Self - Compaction Concrete by using Fly Ash as a Partial Replacement of Cement and Copper Slag with Fine Aggregate**

Abstract: In recent years, many of the structures are in complicated Architectural design, it is very difficult to compact the concrete in congested reinforcement. Self-Compacting Concrete (SCC) is a new kind of high performance concrete with excellent deformability and segregation resistance and that can flow through the gaps, corners and joints of reinforcement, without any vibrations or compaction. It was first developed in japan, 1986. But in our country usage of SCC is very less when compared with other countries like japan, European countries etc. Construction industry is facing a lot of problem with availability of natural resources. To overcome this, we need to go for alternative material in place of conventional aggregate. The attention for the environmental aspects moves the research towards recycling industrial by-products, as Fly ash and Copper slag. In this experimental study M60 grade of concrete is to be adopted. The cement and fine aggregate is partially replaced with fly ash and Copper slag respectively. Fly Ash will be replaced 5%, 10%, 15%, 20%, 25% by weight of cement And Copper slag by weight of fine Aggregates in various percentages such as 10%, 20%, 30%, 40%, 50% .The Compressive strength, Flexural strength, Split tensile strength on hardened concrete with various replacements is to be investigated. Slump cone, V-funnel, L-box, J-box, T-50 will also be conducted

Keywords: Fly Ash, Copper Slag, T50 test, L-box, J-box, V-funnel, Compressive Strength, Split Tensile Strength, Flexural Strength, high water reducer (HWR).

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4.

Authors:	**D. Srinivasulu, D. Vaneela**
Paper Title:	**Experimental Study on Concrete by Partial Replacement of Cement with Fly Ash and Fine Aggregate with Recycled Plastic Granules**

Abstract: In Order To Explore Suitable Replacement, For Concrete Constituent, An Experimental Program Was Undertaken To Replace Cement And Fine Aggregate With Flyash And Plastic Granules Of Size Less Than 4.75mm Respectively. This Research Work Therefore Deals With Studying The Performance Of Concrete By Replacing Cement With Flyash And Obtaining Optimum Percentage And Then Replacing Fine Aggregate With Plastic Granules For Optimum Percentage Of Flyash. The Cement Has Been Replaced By Flyash Accordingly In The Range Of 0%, 10%, 20%,30% & 40% By The Weight Of M30 Grade Concrete. The Various Plastic Proportions Are 0%, 2%,4%,6%,8%, By Weight Of Fine Aggregate. Compression Test, Split Tensile Test And Flexural Strength Tests Will

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Be Done For 7Days, 14days And 28Days The Result Will Be Compared With Conventional Specimens.

Keywords: Fly Ash, Compressive Strength, Flexural Strength, Plastic Granules.

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