Volume 5 Issue 8, January 2016

# International Journal of Innovative Technology and Exploring Engineering

IJITEE

ISSN : 2278 - 3075
Website: www.ijitee.org

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**1.**

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**Paper Title:** Study of Non Point Pollution of Water Resources of Kaithal District

**Abstract:** Kaithal district is one of the 21 districts of Haryana state in northern India. Kaithal town is the district headquarters. Kaithal district is situated in the North- West of the state . The district occupies an area of 2317 km² located between 29o31': 30o12' north latitudes and 76o10': 76o42' east longitudes. The Kaithal city, occupies an area of 43.76 sq. km within the municipal limit. This district came into existence on 1 November 1989. There are 277 villages and 253 Panchayats in Kaithal districts. Kaithal district comprises of five administrative blocks including Pundri, Rajaund, Kaithal, Kalayat and Siwan.. According to the 2011 census Kaithal district has a population of 1,072,861. This gives it a ranking of 423rd in India (out of a total of 640). The study is carried in the Kaithal district of Haryana. Since the Kaithal district in Haryana state of India .The district has a population density of 463 inhabitants per square kilometre (1,200 /sq mi). Its population growth rate over the decade 2001-2011 was 13.39%. Mainly villages of Pundri block showed problem of Total dissolved solids and Hardness in water samples. One or two villages showed high value of fluoride content also.Five to six villages out of fifteen villages chosen showed high content of total dissolved solids , sulphates and alkalinity. In Rajaund block out of seven sample stations two to three stations showed high values of alkalinity and sulphates. Two villages had high fluoride content..In Kalayat block out of four village stations one station showed high value of hardness, total dissolved solids ,sulphates and fluorides.

**Keywords:** Pollution, Ground Water, River, Contaminated, Sub Area: Civil Engineering, Broad Area: Environment Engineering

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**2.**

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**Paper Title:** Generation of Pathology Reference Intervals for Indian Population

**Abstract:** Almost all reference intervals currently used in India are developed by Western, European and other Asia Pacific countries. The use of these reference intervals can be misleading as India is a huge nation with enormous racial and ethnic diversity. The international guidelines on reference intervals suggest the generation of new reference intervals for local homogeneous population. This paper illustrates the literature review done on various papers having similar subject and also enlightens a solution for generation of new reference interval. General Terms- Big data processing, Data mining, Hadoop application for clinical laboratory

**Keywords:** CLSI, clinical laboratory, Reference Interval Generation, Reference Population

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**3.**

**Authors:** **Ebru Alp, Tamer Dag, Taner Arsan**

**Paper Title:** **Indoor Positioning System by Using Triangulation Algorithm**

**Abstract:** In this paper, a Wi-Fi based indoor positioning system (IPS) is developed. IPSs are expected to be used in a vast variety of environments such as shopping malls, hospitals, airports and campuses for navigation purposes, real-time location based advertisements, efficient emergency handling situations. Due to the rapid growth of wireless access points in urban areas and the booming usage of smart phones, Wi-Fi has become one of the key technologies to enable location based services for indoors where GPS technology would not work. This paper introduces least square method based triangulation algorithm for IPSs. The implemented system has been tested under various circumstances in order to achieve the minimum error possible. Wi-Fi channel optimization, filtering, calibration of the relation between the signal strength and distance, using more Wi-Fi modems and the least square method are some of the improvements made on the implemented system. The results show that the location accuracy is significantly improved when compared with the simple triangulation algorithm.

**Keywords:** Indoor Positioning Development, Triangulation Algorithm, Least Square Method

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**12-18**

**4.**

**Authors:** **Najmuddin Aamer, S. Ramachandran**

**Paper Title:** **Pipelined, High Speed, Low Power Neural Network Controller for Autonomous Mobile Robot Navigation Using FPGA**

**Abstract:** The demand for autonomous robots which incorporates efficient path planning and obstacle avoidance is increasing rapidly. In this paper, we have proposed a neural network based hardware architecture for autonomous mobile robot which is able to detect and avoid obstacles by using prediction model of neural network and distribution computation techniques using FPGA. Learning and prediction is implemented by using back propagation method on FPGA Virtex-II pro kit. For flexibility and accuracy of the neural network, floating point based computation method is applied. The proposed model uses the principle of reconfigurability which reduces the implementation cost and area. In this proposed architecture of autonomous mobile robot, pipelined architecture is used which increases the speed and reduces the delay for the prediction. Simulation is performed by using Xilinx 14.3 ISE simulator. Place and Route results exhibit high throughput and low power consumption achieved using this proposed model for controlling the autonomous robot.

**Keywords:** Autonomous Mobile Robot, FPGA, Neural Network, Pipeline, Reconfigurability, Path Planning and Obstacle Avoidance.

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| **Authors:** | **Nasser Rostam Afshar, Ev Rochelle Ashzana Roger Sumail** |
| **Paper Title:** | **Pipelined, High Speed, Low Power Neural Network Controller for Autonomous Mobile Robot Navigation Using FPGA** |

**Abstract:** The construction industry nowadays has higher complexities with increased scope of work, number of parties involved and is technically more advanced. However, the industry does not give adequate attention to proper delay management. The causes of delay need to be identified and assessed. The methods on delay mitigation need to be mapped out to cater for these delays. Even the smallest mistake or unforeseen causes can lead to major lost and even bankruptcy to construction firms. Therefore, the aim of this study is to provide a compilation of causes and effects of delay data for Malaysian construction industry. The discussions related the field of causes and effects of delay in construction projects has been reviewed. Result of delay identification from other countries have been studied and compared to make this paper more comprehensive.The overall discussion will focus on the causes of delay related to each specific group; the direct effects of these delay, and also the correlation between the causes and effects. The data is collected by conducting structured questionnaire surveys and distributing it out to government agencies, consultants, and contractors involved in the construction industry. An in depth study is also done on different methods of delay identification available in project management.

**Keywords:** Delay causes, Delay Effects, Construction Industry,Malaysia,Correlational Analysis

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