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1.

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Paper Title: VM Pipeling Technique for Minimizing Power Consumption and Make Span in Cloud

Abstract: Cloud computing which provides services "on demand" is gaining increasing popularity. However, one of the most challenging problems in cloud computing is to minimize the power consumption in the data centres. The subject of Green Cloud Computing has emerged with the objective of reducing power consumption. While reducing the power consumption it is important to perform the computation in minimum makespan (that is, when all the jobs or Tasks have finished processing). In this paper we propose a technique to achieve the objective of minimizing the power consumption as well as reducing the makespan. To minimize the power consumption, we schedule the tasks on each node utilizing its resources maximum (100%) such that we can reduce the number of nodes used in the data centre. The makespan is reduced using pipeline technique. A method has been proposed and its effectiveness verified by simulating on CloudSim. Results presented in this paper show the advantages of the proposed technique.

Keywords: Power Consumption, Virtualization, Green Cloud Computing. VM (Virtual Machine), Make span, Pipeline.

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2.

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Paper Title: Kinetics and Mechanism of Oxidation of Chromium (III) – [2-(Phenyl Amino) Acetohydrazide] by Periodate

Abstract: Oxidation of [Cr(HL)(H2O)4]3+ (where HL = 2-(phenylamino)acetohydrazide ligand) by periodate was studied spectrophotometrically in aqueous solution over varying ranges of pH, ionic strength ,temperature, complex concentration (2.0 – 6.0)×10-4mol dm-3 and periodate (1.0 - 4.5)×10-2 mol dm-3. The reaction is first order with respect to [H5IO6] and [CrIII]. The rate of reaction increases with increasing of temperature and pH over the study range (1.59-2.62). The rate of the reaction is independent on the complex concentration and decreases with ionic strength. Oxidation of [Cr(HL)(H2O)4]3+ follows the rate law, d[CrVI] / d t =(k2 + k3 / [H+]) [H5IO6] [Cr(HL)(H2O)43+]. Where, k obs. = (k 2 + k 3 / [H+]) [H5IO6]. The thermodynamics activation parameters involving ΔH*and ΔS* have been calculated in excited state.

Keywords: Periodate, oxidation, acetohydrazide.

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3.

Authors: **Sultan, A. M. Imran, M. Arsyad Thaha, dan Muhammad Ramli**

Paper Title: **Influence of Rainfall and Vegetation Against Unconfined Groundwater Potential Withing Coral Sand Layer In Satando Island at Pangkep Regency, South Sulawesi**

Abstract: Population growth in the island will affect water resource potential in island, addition to geological conditions and rainfall. For that reason, this research aimed to see influence of rainfall in the island Satando against potential unconfined groundwater in the coral sand layer in the area of this small island, which will be useful to provide information to local governments and communities of the island on the importance of maximizing rainwater there to sink in and get into the coral sand layer in the area so as to preserve the unconfined groundwater on the island. The research method is done by several approaches include literature and secondary data, field activities of primary data for measuring the condition of the surface of the groundwater in wells resident on the island Satando totaling 20 wells during the rainy season, a season of transition and drought as well as the compilation of all data obtained. Based on data from groundwater level changes are correlated with conditions and intensity of rainfall that occurred on the island, then analyzed influence of rainfall on the unconfined groundwater potential in the coral sand layer Satando island. Total population of 537 inhabitants, require minimal fresh water a year 11767,3M3, potential water on the Satando island a year 10557.7 meter3, so that the deficit needs 1209.6 M3is causing water shortages island residents about 68 days (2 months). Dependence potential of water in wells in coral sand layerwith the intensity of the rainfall conditions that occurred on the Satando island for 33.69% of the intensity of daily rainfall that occurred.The influence of vegetation in particular the effect of very significant breadfruit tree roots where the potential wells are nearby existing vegetation is greater than the breadfruit tree that has no vegetation. Policy management of groundwater on Satando island is to control the use of water and disposal of remnants channeled into absorption wells were created in the yard, arranging the disposal of household waste and toilet, as well as any home maked rainwater tanks. Residents must control and controlling the birth rate and improve the level of education of children of school and also preserve breadfruit tree vegetation with replant and increase the population in the side yard to plant vegetables and other seasonal fruits.

Keywords: Rainfall intensity, resident dug well, coralsand, unconfined groundwater.

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4.

Authors: **Lantu, D. A. Suriamihardja, A. M .Imran, Tri Harianto**

Paper Title: **Relationship Model Between Electrical and Elastic Properties of The Surface Rocks**

Abstract: A mathematical model has been developed to obtain the relationship between two parameters of electrical resistivity and mechanical elasticity of subsurface rocks of the hydrothermal area of Panggo-Killing in Sinjai Regency.The model was developed using data exploration concerning of both methods from the area under consideration. Constructed model is able to relate a time travel of seismic waves propagation that stands for mechanical elasticity to electrical resistivity in the area. The characterictic properties of the relation show a close connection to the parameter of porosity of the subsurface rocks. Comparing the results derived from the modeling with that of obtained from measurement gives suitable approximation with error level of less than 20%. The study concludes that the model is able to predict mechanical elasticity by using geo-electric method, or electric resistivity by using seismic refraction method.

Keywords: Geo-electric, seismic refraction and modeling.

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5.

Authors: **Haerany Sirajuddin, D.A. Suriamihardja, A. M. Imran, M. Arsyad Thaha**

Paper Title: **Coastal Vulnerability Zonation of Pinrang District and Parepare City Area Based on Morphodynamic Review**

Abstract: The understanding and analysis of morphodynamic are essential to explain coastal vulnerability. This paper aims to present a mophodynamic review by assessing validity of the Wright and Short method, and then make zonation map The research method using the conceptual beach classification based on relationships between the characteristic of different types of beaches consisting of wave condition, sediment size, shoreline change and field observations that indicating the occurrence of coastal erosion. The classification presented by Wright and Short known as a function of the dimensionsless fall velocity parameter (Ω) or Dean's number. In this research, observations are presented from 15 beaches around the west coast of Sulawesi Island and their divided into six zones. Morphodynamic state of Lapakaka and Lanrisang – Ujung Tape beaches are reflective (Ω = 0.179 – 0.801), coarse grain with a D50 of 0.31 – 1.52. Maroneng and Ujung Lero beaches are intermediate (Ω = 1.842 – 2.389), fine – coarse grain sediment and D50 of .0.16 – 0.53. Kappe – Data and Sibo beaches are disspative (Ω = 1.842 – 14.089.), fine grain sediment and D50 of 0.22 – 0.29. The interpretation result of Landsat 5 (1995) and Landsat 8 (2015), showed significant shoreline change by erosion process in the Lapakaka beach reached about 26040.62 m2 and Lanrisang – Ujung Tape of 166727.64 m2. Based on morphodynamic review and field study, showed that Lapakaka and Lanrisang – Ujung Tape beaches are susceptible, Maroneng and Ujung Lero beaches are intermediate and Kappe – Data and Sibo beaches are resilience.

Keywords: Morphodynamic, erosion, vulnerability, zonation.

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