CONFERENCES PROCEEDINGS

12th International Conference on Researches in Science and Technology (ICRST)
08-09 December 2016

Conference Venue
Linton University College, Persiaran Utl, Kampung Gebok Batu 12, 71700 Mantin, Negeri Sembilan, Kuala Lumpur, Malaysia

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KEYNOTE SPEAKER

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Head of School, School of Civil, Engineering, Linton University College,
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KEYNOTE SPEAKER

Nader Ale Ebrahim

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KEYNOTE SPEAKER

Dr. Sunny Joseph Kalayathankal
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On the convergence of some iterative algorithms to approximate fixed points of nonlinear mappings

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ABSTRACT
In this paper we present a new iterative algorithm to approximate fixed point of nonexpansive and pseudocontractive mappings. We establish convergence results. We also discuss numerical examples to illustrate theoretical results. In addition, we compare the convergence of these iterations with existing iterations using the numerical computation.

Isolation of thermostable-cellulase producing bacteria from sawdust

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ABSTRACT
Twenty (20) cellulases producing bacteria were isolated from sawdust samples. They were identified as Actinomyces naeslundii (4), Pseudomonas aeruginosa (12), Thermoactinomyces vulgaris (1), Roseomonas sp. A1 (1), and Anoxybacillus rupiensis (2). Roseomonas sp. (A1), Anoxybacillus rupiensis E1 and Anoxybacillus rupiensis 5H were the best three thermostable cellulase producing bacteria. Their extracellular enzymes were stable at 60°C to 65°C for 1 hour, and 50°C to 55°C for 2 hours. These isolates exhibited significant differences in cellulase production in the presence of carbon and nitrogen sources at 0.5% to 2.5% (w/v) concentration. Anoxybacillus rupiensis (5H) in medium supplemented with 1% carboxymethylcellulose produced 9.22 U/mL of cellulase while Anoxybacillus rupiensis (E1) produced 3.0 U/mL of cellulase in medium supplemented 1% (w/v) tryptone. Optimum production of cellulase was at 50°C and pH of 7, while optimum activity of the enzyme was at 60°C for A1 and pH of 9 for 5H.

Key words: Thermostable, Cellulase, Anoxybacillus rupiensis, Thermoactinomyces vulgaris, Tryptone
### Molecular docking studies and ADMET predictions of pyrimidine coumarin scaffolds as potential IDO inhibitors

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**ABSTRACT**

Indoleamine 2,3-dioxygenase (IDO) is emerging as an important new therapeutic drug target for the treatment of cancer. IDO catalyzes the rate-limiting step of tryptophan degradation through kynurenine pathway. Reduction in local tryptophan concentration and the production of immunomodulatory tryptophan metabolites contribute to the immunosuppressive effects of IDO. Presence of IDO on dendritic cells in tumor-draining lymph nodes leading to the activation of T cells results in formation of immunosuppressive microenvironment for the survival of tumor cells, shows the importance of IDO as a novel anticancer immunotherapy drug target. Pyrimidine has the unique ability to act through many different mechanisms and its multiple biological activities make it an ideal therapeutic agent in treating cancer. In this effort directed towards the discovery of novel, potent IDO inhibitors for the treatment of cancer. In the present study a library of pyrimidine derivatives has been designed and evaluated for their anti-cancer activity targeting IDO using various computational approaches. Twenty new pyrimidine series of compounds were designed and docking studies were performed. All of them have found to be successfully docked inside the active binding domain of IDO with a binding energy in a range of -4.59 to -9.53 Kcal/mol with predicted IC50 value range of 4.72 micro molar to 456.19 nano molar. On the other hand, calculated 2DQSAR molecular descriptor properties of the compounds showed promising ADME parameters and found to be in compliance with Lipinski’s rule of five. Among all the twenty compounds tested, compound 14 (N’-(6-chloro-2-oxo-chromene-3-carbonyl)-4-(4-methoxyphenyl)-6-methyl-2-thioxo-3,4-dihydro-1H-pyrimidine-5-carboxyhydrazide) was found to be the best lead like molecule with a binding energy of -9.53 kcal/mol. Conclusively, newly designed compound 14 of the present study have shown promising anti-cancer potential worth considering for further evaluations.

**Keywords:** IDO domain, pyrimidine, coumarin, docking, ADME, QSAR, anti-cancer
### ABSTRACT

**Purpose:** To synthesize series of 5-substituted-2-(2-(5-aryl-1H-1,2,4-triazole-3-ylthio)acetyl) hydrazine carbothioamide/ carboxamides and evaluate their anticonvulsant activity and in silico properties.

**Methods:** Derivatives of 5-substituted-2-(2-(5-aryl-1H-1,2,4-triazole-3-ylthio)acetyl)hydrazine carboxamides/carbothioamides were obtained by condensation of Ethyl-2-(5-aryl-1H-1,2,4-triazol-3-ylthio)acetates with thiosemicarbazide or semicarbazide. The synthesized compounds were characterized by Fourier transform infrared spectroscopy (FTIR), nuclear magnetic resonance spectroscopy (1H NMR) and mass spectrometry (MS) while their anticonvulsant activity was screened against pentylenetetrazole-induced seizure (PTZ) against phenytoin and diazepam as reference standards. Molecular docking (in silico) studies were performed using 4-aminobutyrateaminotransferase in order to predict possible protein-ligand interactions.

**Results:** Among the target compound 3f exhibited lower activity with 50% protection. The compounds 3e and 3h showed good to moderate levels of anticonvulsant activity with 83.3% protection at 100 mg/kg. The compounds 3g and 3i afforded most significant anticonvulsant activity with 100% protection at a dose of 30 mg/kg. In silico results also revealed maximum binding affinity to GABA-AT protein which was higher than other compounds.

**Conclusion:** The synthesized compounds showed potent anticonvulsant activity. Molecular docking results should give an insight into how further modification of lead compound can be carried out for higher inhibitory activity.

**Keywords:** Anticonvulsant, 1,2,4-triazole, carbothioamides, pentylenetetrazole, In silico studies, Molecular docking.
ABSTRACT

Bioactive phytocompounds are a rich source of chemo preventive substance. The selected bioactive phytocompounds like Oleanolic acid, Ecdysterone, Betaine, Stigmasterol Acetate, Cinnamic acid were screened for the inhibition of glycogen synthase kinase-3β (GSK-3β) protein, a wound-healing biomarker, by molecular docking and dynamic studies. 2-Chloro-5-[4-(3-Chloro-Phenyl)-2, 5-Dioxo-2,5-Dihydro-1h-Pyrrol-3-ylamino]-benzoic acid was used as an inhibitor for GSK-3β with minimum binding energy(-31.5 Kcal/mole). The docking analysis ranked the selected phytocompounds that have high theoretical scores to bind to the proteins. The binding mode of the phytocompounds that bound to all the target proteins with high affinity was studied. The simulation demonstrated that the protein-ligand complex stabilized by multiple hydrogen bonds was preferentially formed at the catalytic site.

The results highlighted in this study reveals that among the selected lead phytocompounds that docked into the active site of GSK 3 Beta, Ecdysterone showed acceptable 6 hydrogen bond interactions with residues LYS85, TYR134, ARG141, GLN185, ASP200, PRO136 when compared to the reference compound with 5 hydrogen bond interactions. Thus based on the docking score Ecdysterone could be considered as a novel compounds that can be used for experimental studies for the inhibition of GSK–3β Kinase. These results can be helpful for further design of novel GSK-3β inhibitors.

Keywords: Phytocompounds, Molecular Docking, Simulation, Receptor, Ligand, Inhibition.

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Creative Economic Growth on The Thematic Tourism Development in Indonesia

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Abstract

Creative economy has developed in various countries and are showing significant positive results, which include employment, increase national income and regions, and imaging regions at the international level. Imaging an area emerging when a region became famous with creative products it produces. In a broader context, the imaging area using creative economy also connected with various sectors, including the tourism sector. All activities related to tourism as well as multidimensional and multidisciplinary emerging as a manifestation of the need for everyone and the country as well as the interaction between tourists, central government, local government, and employers. The development of tourism is based on the principle of law which is realized through the implementation of tourism development plans with due regard to the diversity, uniqueness and distinctiveness of culture and nature, and...
the human need for travel.

Keywords: Tourism, Creative economy, Thematic tourism, Thematic village, Culture

Fuzzy complex valued metric spaces

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ABSTRACT
In this paper, we introduce the concept of fuzzy complex valued metric space by using the notion of complex fuzzy set, the topology induced by this space and some related results of them. In order to illustrate our results we equip the paper with some

Keywords: Complex valued metric space, fuzzy metric space, complex fuzzy set, fuzzy complex valued metric space.

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ABSTRACT
The effect of cocoa pod husk extract (alkali) concentration and treatment on the chemical composition of dried sorghum spent grain (pito mash) was studied. This was followed by the incorporation of the extract-treated pito mash in chicken grower and layer diets to assess its effects on the blood biochemical indices of the chicken. Four different solutions of cocoa pod husk with concentrations of 62.5g/0.5L, 125g/1L, 187.5g/1.5L and 250 g/2.0 L were prepared. Each solution was divided into three equal parts, and used to treat 50 g of milled pito mash. The alkali-treated pito mash were allowed to digest for 24, 48 and 72 hours. The 48-hour digestion duration, was found to be the most effective in reducing the crude fiber content of the pito mash from 10.22 to 6.74 %.
The addition of 1.5 L of the cocoa pod extract to 50 g of the dried pito mash, yielded the best mixing rate and was employed in a 48-hour treatment of the pito mash used in the feeding trial. The treated pito mash was included in the diets at 0, 5, 10 and 15 % levels. Each diet was fed to 4 treatment groups of 44, 8-week old Lohmann brown layer chickens, weighing on the average between 340 and 341g per group. A complete
randomized design (CRD) was applied to the treatments. Feed and water were provided ad libitum over the 11-month experimental period. Results showed that blood biochemical indices like triglyceride, total protein and albumin showed significant (P< 0.05) improvements whilst cholesterol, high density lipoprotein and low level lipoprotein and globulin recorded no significant differences with increasing levels of treated pito mash inclusion. Also, the albumin/globulin ratio showed a decline as the alkali-treated pito mash inclusion levels increased from 0 – 15%.

**Aws Alaa**

**GICICRST1613058**

A Novel Methodology for the Evaluation and Benchmarking of Skin Detectors using Multi-criteria Decision-making Techniques

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**ABSTRACT**

Evaluation and benchmarking processes considered difficult tasks of the skin detection approach due to of multiple evaluation attributes and conflicting criteria. Whereas several evaluating and benchmarking techniques have been proposed, these approaches have many limitations. Selection several attributes for reliable skin detection based on multi-attribute benchmarking approaches, particularly are limited. Nevertheless, the aims of this study is developing a new framework for evaluating and benchmarking skin detection on the basis of artificial intelligent models using multi-criteria analysis. In this direction, we have proposed applying two experiments. first experiment depended on two stages: (1) Development of a skin detector using multi-agent learning based on different color spaces to create a dataset of various color space samples for benchmarking and (2) Evaluation and testing the developed skin detector according to multi-evaluation criteria (i.e. reliability, time complexity, and error rate within dataset) to create a decision matrix. While, second experiment applies different decision-making techniques (AHP/SAW, AHP/MEW, AHP/HAW, AHP/TOPSIS, AHP/WSM, and AHP/WPM) to benchmark the results of the first experiment (i.e. the developed skin detector). Thus, we will use the mean, standard deviation, and paired sample t-test to measure the correlations among the different techniques based on ranking results.

**Keywords:** evaluation and benchmarking; multi-criteria analysis; Artificial intelligence; skin detector; multi-criteria decision-making techniques.

**Emad Khudaish**

**GICICRST1613059**

Electrochemical oxidation of chlorpheniramine at polytyramine film doped with ruthenium (II) complex: Measurement, kinetic and thermodynamic studies

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ABSTRACT
A solid-state sensor based on polytyramine film deposited at glassy carbon electrode doped with tris(2,2’-bipyridyl)Ru(II) complex (Ru/Pty/GCE) was constructed electrochemically. A redox property represented by [Ru(bpy)3]3+/2+ couple immobilized at the Pty moiety was characterized using typical voltammetric techniques. The XPS data and AFM images confirm the grafting of Ru species on the top of Pty while the electrochemical impedance spectroscopy (EIS) data supports the immobilization of both surface modifiers onto the GCE. The constructed sensor exhibits a substantial reactivity, stability and high sensitivity to chlorpheniramine maleate (CPM) oxidation. The detection limit (S/N = 3) was brought down to 338 nM using differential pulse voltammetry method. Thermodynamic and kinetic parameters were evaluated using hydrodynamic method. The apparent diffusion coefficient and the heterogeneous electron transfer rate constant for the CPM oxidation were 2.67 $\times$ 10$^{-5}$ cm$^2$ s$^{-1}$ and 3.21 $\times$ 10$^{-3}$ cm s$^{-1}$, respectively. Interference studies and real sample analysis were conducted with excellent performance and satisfactory results.

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A Probability Analysis of Construction Project Schedule using Risk Management Tool

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ABSTRACT
Construction industry tumbled along with other industry/sectors during recent economic crash. Construction business could not regain thereafter and still passing through slowdown phase, resulting in time and cost overrun of many real estate as well as infrastructure projects. There are many theories, tools, techniques with software packages available in the market to analyse construction schedule. This study focuses on the construction project schedule and uncertainties associated with construction activities. The infrastructure construction project has been considered for the analysis of uncertainty on project activities affecting project duration and analysis is done using @RISK software. Different simulation results arising from three probability distribution functions are compiled. This study helps construction project managers to plan and prepare more realistic schedules for construction projects and document probable project completion date in the contract to avoid compensations or claims arising out of missing the planned schedule.

Keywords: - Construction Project, Distributions Project Schedule, Uncertainty

Yan Watequlis Syaifudin
GICICRST1613061

Twitter Data Mining For Sentiment Analysis On Peoples Feedback Against Government Public Policy

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ABSTRACT

Government policies often get positive or negative response from the public. The response from the community feedback can be conveyed through print and electronic media. With the rise of social media today, people have a tendency to convey such feedback through social media such as Facebook, Twitter, Instagram, Path and other social media. Thus, to determine the public response to this policy that has been implemented, the government needs to know how your feedback from people who come from social media. But because of the feedback, it is difficult to detect how many positive or negative response from the public. Therefore, in this study will develop a system to obtain data in the form of feedback coming from one of the social media that is often used by the public, namely Twitter. Tweet or post on the community will be collected based on the time and place specified. Having obtained a collection tweet, would do next text preprocessing stage. Tweet text already passed the stage of preprocessing, for further processing in sentiment analysis, to determine the positive and negative responses from the public against government policies that have been applied.

Keywords
Text mining, Text preprocessing, Twitter, Nazief and Adriani algorithm, Public Policy

FORECASTING AIR PASSENGER VOLUME IN SINGAPORE: DETERMINING THE EXPLANATORY VARIABLES FOR ECONOMETRIC MODELS
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ABSTRACT

Nowadays aviation industry has become an important portion of Singapore economies progressively, it is essential to provide accurate prediction for aviation development. However, due to instability of economies, it is advisable to capture the impact of economy into forecasting. This paper explores several explanatory variables, such as Singapore GDP, China GDP, exchange rate and tourist numbers, to build econometric models to predict the air passenger movements and analyzes and compares the relative results from corresponding models. Before applying for model simulation, correlation among variables were checked. Various combination of the variables were implemented to establish the models. Five econometric models were constructed for 18 years prediction from 1998 to 2015 in the report and the
The performance of these models were measured using MAPE, RMSE and degree of divergence. By comparing the 5 models, the variables effectiveness is investigated. Moreover, the impact of the variables was also scrutinized. Finally, appropriate models for Singapore situation are to be recommended. Afterwards, forecasting for the next 18 years till 2033 are conducted and analyzed to have a better idea of the future development. 

**Keywords:** Air passenger volume; Econometric models; Explanatory variables; Long-term forecasting; GDP

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**ABSTRACT**

Citarum river is one of the longest river in Indonesia, with coordinate 7°4'31"S 107°44'53"E. Citarum river has an upstream which located in the region of Neglawangi, Kertasari, and has a downstream in the northern coast of Bekasi. A lot of people domiciled on the watershed of Citarum. Natural disaster such as landslide has become a common thing for people who live around the watershed of Citarum. Study of rock structures located in Citarum river may explain why landslides often occur in areas of Citarum river. The rock sample was conducted at three different stations with each station has a different rock structures. High rainfall causes water flow in the river rises. With the high discharge of water by high rainfall, certain rock structures that have a low resistance to water will be easily eroded and causes the soil above the rock structure vulnerable to landslides. 

**Keywords:** Citarum, Landslide, Rock Structure, Rainfall, Water Discharge

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**ASSESSING NEEDS WITH SENTIMENT ANALYSIS USING MOBILE-BASED REAL-TIME DECISION SUPPORT SYSTEM (DSS) FOR EVACUATION CENTERS**

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ABSTRACT
Emergency situations occur unpredictably and it cause the policy-makers and emergency response team to shift their focus and attention immediately to deal with the situation. When disasters become large scale, all the limitations resulting from a lack of integration and collaboration among all the involved organizations begin to be exposed and further compound the negative consequences of the event. As a result, the challenges for a group Decision Support Systems (DSS) in emergency situations need tremendous attention, hence, slow, ineffective strategies for gathering, processing, and analyzing data can also play a role for inefficient emergency response. Information technology, specifically decision support systems, can be used to reduce the time needed to make crucial decisions regarding task assignment and resource allocation. In this paper, development and utilization of a mobile-based tool for facilitating disaster management that includes real-time information about available and required resources to successfully respond to an emergency is proposed. For assessing the needs and sentiments of the evacuees, a corpora will be designed in which algorithm is applied in classifying the needs and sentiments for the mobile app. These different decision results are aggregated into an infographics from the extracted data for illustration and verification purposes to support the final decision-making.

Keywords: NLP, Sentiment Analysis, Decision Support System, Disaster Management System

PROPOSE A NEW MODEL FOR EARLY DETECTION OF BREAST CANCER USING DATA MINING

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ABSTRACT
The Idea of autonomous agent in medical area is not new. Besides this, the concept of human-agent teamwork has made it more effective. This concept mostly focused on adjustability and portability of autonomous-agents rules and behaviors. But the questions arise about the primary state of autonomous-agent for setting up its primary rules. In this project, we are mainly focused on setting up the initial rules and circumstance of autonomous-agent. We try to find the most effective way to manage the initial rules of autonomous-agent. Here, we work for the agent that can assist a solution for proper treatment. Our idea here is to use the old huge collection of data from hospital and to mine these data to find something sensible. Our purpose of finding sensible data to use them as initial behaviors of the agent. After the creation of autonomous-agent, we adapted the methodology of human-agent teamwork so that the performance of the agent can be increased based on the cooperation of the human operator. In this project, we have proposed an algorithm to manage the priority of the rules of the agent.
<table>
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<td>ABSTRACT</td>
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<td>The powdered leaves of Hippocratea obtusifolia was percolated with ethanol and then sequentially extracted with petroleum ether, chloroform, ethyl acetate and methanol. The extracts were respectively labeled HO1, HO2, HO3, and HO4, with the ethanolic extract labeled HO. The extracts were subjected to bioactivity against lactation inducement, and the chloroform extract labeled HO2 was found to be the most active. The HO2 extract was then subjected to column and thin layer chromatography with similar fractions pooled together. The pooled fractions were then subjected to bioactivity testing against lactation inducement, and the fraction labeled HO2-13 was found to be the most active, this was subsequently subjected to column and thin layer chromatography with similar fractions pooled together. The pooled fractions were again subjected to bioactivity testing against lactation inducement, and the fraction labeled HO2-13-111 was found to be the most active. The fraction HO2-13-111 was subjected spectroscopic analysis, using Infrared, Mass spectroscopy, and both 1H and 13C NMR data obtained. The structure of the compound present in fraction HO2-13-111 was then elucidated based on the obtained data.</td>
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<td>Keywords: Lactation, thin-layer, column chromatography, force-feeding, progesterone.</td>
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<td>ECOLOGICAL AND NATURAL SOLAR DYEING OF ELASTIC POLYESTERS</td>
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<td>ABSTRACT</td>
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<td>Fossil fuels are the best known energy sources for generating power. However, these fuels are not clean enough for our world and damage the environment adversely. Due to these negative effects, clean energy sources become more and more</td>
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important. Sun and its solar energy is a very good clean energy candidate for more sustainable world. However, in the textile industry, solar energy generally only is used for photo-degradation of textile effluents and/or used to heat water for textile finishing applications. There are only very limited approaches, only in some niche examples, about solar dyeing for textile fiber coloration. Moreover, there are no industrial approaches for this type of textile dyeing. In this study, Poly(butylene terephthalat) (PBT) and Poly (trimethylene terephthalate) (PTT) fibers, well known as elastic polyesters, were dyed with the help of the energy of sun via solar dyeing process with natural red onion peel, the waste materials of food industry, extract. The colorimetric and color fastness properties (such as rub, sea water, water and wash fastness) of solar-dyed samples were examined. Red onion peel dye led to beige and brownish color shades on PTT and PBT fiber fabrics. Overall, the dyed PTT and PBT samples exhibited moderate to good wash, rub, water and sea water fastness performance. The use of solar energy seems to be promising for the future of textile dyeing.

Keywords: Poly (butylene terephthalate) (PBT), Poly (trimethylene terephthalate) (PTT), natural textile dyeing, solar dyeing, red onion peel extract

Maira Khan
GICECG1613053

12th International Conference on Researches in Science and Technology (ICRST), 08-09 December 2016, Linton University College, Persiaran Utl, Kampung Gebok Batu 12, 71700 Mantin, Negeri Sembilan, Kuala Lumpur, Malaysia
wonderful experience. All strategic actions listed above will provide a research model in developing and reviving Bhamala as a tourist Site and developing Floating market near Khanpur Dam. The Agenda for Revival of Bhamala and floating market for Khanpur Dam will focus on ending poverty in all forms, achieve food security and improved nutrition and promote sustainable agriculture, ensure healthy lives and promote well-being for all at all ages, achieve gender equality and empower all women and girls by promoting their handicraft skills. Ensure availability and sustainable management of water and sanitation for all, ensure access to affordable, reliable, sustainable and clean energy for all, promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation, Reduce inequality , make settlements inclusive, safe, resilient and sustainable, Take urgent action to combat climate change and its impacts. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. I anticipate that this can provide immaculate opportunities for the revival of Bhamala as a tourist attraction and work towards improving the living conditions of the residents of Haripur by promoting local crafts, vernacular architecture and indigenous materials of that region.. Sustainable proposal for Bhamala and Khanpur Dam will be energy efficient on the same lines as humanitarian projects of Thai Experts. The design solution will aim to provide building improvement and infrastructure.

<table>
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<tr>
<th>Pyrene solubilization from contaminated soil using mixed surfactants</th>
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<tbody>
<tr>
<td>Abbas Rezaee, Department of Environmental Health, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran</td>
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<tr>
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</tr>
</tbody>
</table>

**ABSTRACT**

The purpose of this study was to statistically model and optimize of mixed surfactants effects on the solubilization rate of pyrene from contaminated soil. The solubilization was evaluated by pyrene desorption efficiency as the response. The effect of mixed surfactants, triton X100 (TX100) and Sodium dodecyl sulfate (SDS) on the pyrene solubilization from soil was determined and the process was then optimized by means of Response surface methodology (RSM). Statistical model was presented based on the variables to optimize the pyrene solubilization. Twenty one experiments designed by Central composite design (CCD) were carried out and the response was modeled using a polynomial equation as function of the variables. The optimum values of the surfactants were found to be SDS: TX100 mixed ratio with 1:1. A desirability value of 0.903 was obtained, showing that the model is significant and give the desired conditions. Validation of model predictions for solubilization...
reveals the efficacy of the model for pyrene solubilization from soil. The level of applied surfactants for pyrene solubilization from soils and sediments can be improved by decreasing the surfactant level and thus the remediation cost. Based on the obtained results, mixed surfactant can be used to solubilize pyrene from clay-silty soils.

Keywords: Contaminated soil, Optimization, Pyrene, Solubilization

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The Role of Geographic Information System in E-Government

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ABSTRACT

The emergence of Geographic Information System (GIS) has played an important role in government initiative. E-Government, online application organized by government, usually equipped by GIS system like “GIS-based DSS in e-livestock Indonesia” that proposed in empirical research. GIS can capture, store, manipulate, analyze and present spatial data that very useful involved in government area. GIS has been used in various fields like agriculture, transportation through waste management. In this paper, we describe the state of the art GIS in E-Government. GIS analytics and future business model are discussed in this paper. Several E-Government applications that used GIS technology is also discussed. Meta-Ethnography is used for synthesizing study. This study contributes as a benchmark for researcher and government to develop GIS in E-Government context.

Keyword: Geographic Information System, E-Government, Analytics, GIS Business Model

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Preparation of Natural Rubber Graphene Composite via In-situ Reduction of Graphene Oxide

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ABSTRACT
Numbers of studies have been reported on the production of chemically reduced graphene oxide (rGO) for dry rubber processing. However, the used of these reducing agents could be deleterious to the natural rubber latex properties. In this study, rGO was produced in a single step without the use of strong reducing agent and incorporation of the rGO was accomplished using simple latex mixing method under room temperature. The resultant composite showed good colloidal stability and rubber films produced from the composite exhibited good mechanical properties with improved ageing resistance. The composite with 0.1phr rGO showed a 14% and 4% improvement in stress at 700% elongation as compared to unfilled rubber film and rubber film incorporated with the same amount of GO respectively. Rubber films produced from the resultant composite, unfilled vulcanized latex and latex post added with 0.1phr of rGO showed an 80%, 67% and 75% retention of stress at 700% elongation respectively after accelerated ageing at 100°C for 22 hours. Morphology of the rubber films were studied using network visualization-transmission electron microscopy. The rubber films were also analyzed using differential scanning colorimeter (DSC), raman spectroscopy and XRD. Findings from these analyses suggested that rGO is bonded to the rubber particles thus enhanced the mechanical properties of the composite.
Keywords: natural rubber latex, reduced graphene oxide, composites, mechanical properties, network visualization

ABSTRACT
This article seeks to analyse governance decision-making in the environmental context through an understanding and interpretation of the relationship between good environmental governance and sustainable development in North Africa“Algeria”. It critically assesses recent case law in an attempt to understand how evaluate authorities’ environmental decisions. In reaching its objectives, this article considers also how environmental decisions are made in the first place and asks the question: what are the value choices underlying government’s decisions and what role does sustainable development play in informing decisions for environmental governance.
Keywords: Environmental governance, Sustainable development, Environmental decision-making, good governance
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» 17th International Conference on Researches in Science & Technology (ICRST), 21-22 July 2017, Bangkok, Thailand

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» 18th International Conference on Researches in Science & Technology (ICRST), 09-10 June 2017, Rome, Italy