

# Contents

Preface	iii
Organizing Committees	x
<b>ICESE 2011 Session 1</b>	
Determination of Dioxins Produced through Hydrothermal Reaction of Biomass Waste, Chicken Manure <i>S.YILDIZ BIRCAN, Y. HASEGAWA, K. OHBA, K. MATSUMOTO and K. KITAGAWA</i>	1
Patient perspective: The “Usability evaluation” approaches as assessment for quality of outpatient spatial design. <i>Siti Norsazlina Haron and Md Yusof Hamid</i>	4
Toxicity of Cu <sup>2+</sup> , Cd <sup>2+</sup> and Pb <sup>2+</sup> Metal Ions in Chironomids and Factors that Affect Metal Accumulation <i>Claire C. Lagrana, Dahlia C. Apodaca and Carlos Primo C. David</i>	9
Hourly solar radiation estimation from limited meteorological data to complete missing solar radiation data <i>Dimas F.A., S.I. Gilani and M.S. Aris</i>	14
Effluent quality performance of horizontal subsurface flow constructed wetlands using natural zeolite (escott) <i>Shuib, N., Baskaran, K., Davies, W.R. and Muthukumaran, S</i>	19
Stochastic Simulation for the Atmospheric Wind using a Continuous Cascades <i>R. CALIF</i>	24
Adsorption potential of As (III) & As (V) from water using low cost modified natural sand <i>Anjali Gupta, M. Yunus and Nalini Sankararamakishnan</i>	29
Using membrane electrolysis method to generate chlorine dioxide <i>Yi-Tze Tsai, Yung-Hsu Hsieh, Chia-Lin Yang, Chen-Yu Chang and Shu-Hai You</i>	33
Assessing the quality of ASTER DEMs for Hydrological Applications (Case Study: Cheshmehkhan Catchment in the northeastern of Iran) <i>Seyed Reza Hosseinzadeh</i>	37
Simple system for handling and reuse of gray water resulted from ablution in Mosques of Riyadh City, Saudi Arabia <i>Mohammad Ibrahiem Al – Wabel</i>	42
<b>ICESE 2011 Session 2</b>	
Preliminary research of carbon-sink effect of Tianjin’s wetlands system in the context of global climate change <i>Sandra Meng Ying Lee</i>	46
Effect of cationic and anionic dye adsorption from aqueous solution by using chemically modified papaya seed	50

<i>N. Nasuha, H.Z. Zurainan, H.I. Maarof, N.A. Zubir, N. Amri</i>	
Land Cover Classification in Makkah Area using Frequency-based Contextual Classifier <i>Mohd Rifhan Mustapha, Mohd Zubir Mat Jafri, Lim Hwee San and Saumi Syahreza</i>	55
Constructing a Public Health Information System for Assisting Dengue Fever Control <i>Patrick S. Chen, Shu-Chiung Lin and WeiHeng Lin</i>	60
Overburden Effect Examination Of Cubical Anomaly Using Geometry Normalized Electromagnetic System (GNES) Equipment <i>Muhammad Syukri Surbakti, Lim Hwee San, Mohd Zubir Mat Jafri and Norhaslinda Mohamed Tahrin</i>	64
Bio-Fuel Source from Combination Feed of Sewage Sludge and Rice Waste <i>Fairous Salleh, Rusnah Samsuddin and Maryam Husin</i>	68
Economic and environmental management strategies of organic waste <i>Ferencz, A., Notari, M., Levai, P., Czeglédi, M. and Berde, Cs</i>	73
Global and Local Problems of Sustainability in Hungary <i>Ferencz, A., Notari, M., Levai, P., Czeglédi, M. and Berde, Cs.</i>	77
Effects of size distribution on flotation kinetics of Chalcopyrite <i>Luo Xian-ping, Tang Xue-kun, He Li-ping and Luo Li-ying</i>	81
Bukit Merah Reservoir Sedimentation Assessment <i>Zorkeflee Abu Hasan, Mohd Suffian Bin Yusoff and Siti Hidayah Binti Abu Talib</i>	86
<b>ICESE 2011 Session 3</b>	
A Genetic Algorithm-Based Approach Design for Energy-Efficient Building in Thailand <i>Supatcharawadee Pornkrisadanuphan and Pipat Chaiwiwatworakul</i>	91
Oxygen Concentrating and Application of Life Safety System for Workers in High Altitude Area <i>Yongling Li, Yingshu Liu, Yanxiang Jia and Wenhai Liu</i>	96
Monitoring the Association between GPS PWV and Lightning Activity during the 2009 Winter Monsoon over Bangi Malaysia <i>Wayan Suparta, Ja'afar Adnan and Mohd. Alauddin Mohd. Ali</i>	101
Screening and Application of Nitrifying Bacteria at Low Temperature <i>Xiuguang Jiang, Yun Hao, Qing Tian and Aiyin Chen</i>	107
Combination of Lithium Iron Phosphate Battery and Super-Capacitor to Improve the Efficiency of Engine <i>Ching Shang Cheng, Yong-Zhi Wang and Wen-Jie Zeng</i>	110
Hyperaccumulation of Copper by Two Species of Aquatic Plants <i>Hamizah Mokhtar, Norhashimah Morad and Fera Fizani Ahmad Fizri</i>	115
Effects of Additives on Seawater Flue Gas Desulfurization <i>Yu Zhang, Yuhang Gao, Jiti Zhou, Guodong Wang and Chengyu Li</i>	119

A study on the water quality of River Amajac, Hidalgo State, Central Mexico. <i>M.P. Jonathan, N. Thangadurai and Mariano Norzagaray Campos</i>	124
The Potential Use of Bamboo as Green Material for Soft Clay Reinforcement System <i>Marto, A. and Othman, B.A.</i>	129
Compaction Characteristics and Permeability Of Tanjung Bin Coal Ash Mixtures <i>Marto A., Awang A.R. and Makhtar A.M.</i>	134
<b>ICESE 2011 Session 4</b>	
Human Ovarian carcinoma microarray data analysis based on Support Vector Machines with different kernel functions <i>Meng-Hsiun Tsai, SHIH-HUEI wang, Kun-Cheng Wu, Jui-Ming Chen and SHENG-HSIUNG CHIU</i>	138
Fractions of Copper, Chromium and Arsenic during the aerobic composting process of chicken manure and CCA-treated wood <i>Somjai Karnchanawong and Neeraya Rattanasatchan</i>	143
Application of GPR Method Due to Active Faults Determination in Urban Area,Case Study: North Shahre Ray Fault, South of Tehran, Iran <i>A.khorsandi, M .Abdali, T.Miyata and J.yurugi</i>	148
Removal of heavy metals from a contaminated calcareous soil using oxalic and acetic acids as chelating agents <i>S. Oustan, S. Heidari , M.R. Neyshabouri, A. Reyhanitabar and A. Bybordi</i>	152
A New Technique for Quantifying Sensible Heat Loss by Building Finishes <i>Janet F. C. Sham and Tommy Y. Lo</i>	156
Review Of Ant Colony Optimization Algorithms On Vehicle Routing Problems And Introduction To Estimation-Based ACO <i>NajmeZehraNaqvi, HarmeenKaurMatheru and KomalChadha</i>	161
Study On Thermal Comfort In University Hostel Building Case Study At Universiti Tun Hussein Onn Malaysia (UTHM), Batu Pahat <i>Ruzaimah binti Razman, Abd Halid bin Abdullah and Abdul Zaki bin Abdul Wahid</i>	167
CHEMICAL AND PHYSICAL PROPERTIES OF FIRED-CLAY BRICK AT DIFFERENT TYPE OF RICE HUSK ASH <i>Izwan Johari, Ramadhansyah Putra Jaya, Syamsuhaili Said, Badorul Hisham Abu Bakar and Zainal Arifin Ahmad</i>	171
Exploring Opportunities for Sustainability in the Malaysian Palm Oil Industry <i>Rory Padfield, Sune Hansen, Christopher Preece and Effie Papargyropoulou</i>	175
Automated real-time dynamic identification of flying and resting butterfly species in the natural environment <i>Kar Seng Loke, Simon Egerton, David Cristofaro and Steven Clementson</i>	179

#### **ICESE 2011 Session 5**

Diagnosis of Drought in Bangladesh using Standardized Precipitation Index <i>M. Rafiuddin, Badal Kumar Dash, Fahima Khanam and M. N. Islam</i>	184
Monitoring slope based on SAR-interferometric technique and ground Measurement <i>Habibah Lateh, Jefriza and Yrjo Rauste</i>	188
Resolving hydro-environmental conflicts under uncertainty using Fallback Bargaining procedures <i>Kaveh Madani, Laleh Shalikarian and S. T. O. Naeeni</i>	192
Design of Experiment on Sustainable Daily Air Surface Temperature Prediction in Cameron Highlands, Malaysia <i>Abdul Talib Bon</i>	197
Environmental Impacts of E-Commerce <i>Sunita Tiwari and Pratibha Singh</i>	202
Chelate Agents Enhanced Electrokinetic Remediation for Removal of Lead and Zinc from a Calcareous Soil <i>Mahsa Madani Hosseini, Mohsen Farahbakhsh and Gholamreza Savaghebi</i>	208
CEMENTITIOUS COMPOUNDS FORMATION USING POZZOLANS AND THEIR EFFECT ON STABILIZATION OF SOILS OF VARYING ENGINEERING PROPERTIES <i>S.M. PRASANNA KUMAR</i>	212
Nitrogen fixation efficiency in native strains compared with non-native strains of <i>Rhizobium leguminosarum</i> <i>Mehdi Mehrpouyan</i>	216
Water CONSERVATION Management in National Capital Region <i>V. U. Koundanya and Nitika Gupta</i>	220
Solar Erythema Daily Dose Distributions Maps over Peninsular Malaysia Obtained By Ozone Monitoring Instrument <i>Nor Hidayah Hisamuddin Shah, H. S. Lim and M. Z. Mat Jafri</i>	223
<b>ICESE 2011 Session 6</b>	
Energy Cost Reduction By Partially Operation Of Thermal Energy Storage Based On Building Load Profile <i>Zamri Noranai, Hamidon Salleh and Mohammad Zainal Md Yusof</i>	227
Decolorization of Acid Red 1 by heterogeneous Fenton-like reaction using Fe-ball clay catalyst <i>H. Hassan and B.H. Hameed</i>	232
Arsenic Removal by Nanoiron in the Gas-bubbled Aqueous Solution <i>Visanu Tanboonchuy, Chih-Hsiang Liao and Nurak Grisdanurak</i>	237
Effects of Hardener Type and Particles Size on Formaldehyde Emission Pollution <i>Mohsen SAFFARI</i>	242
Quality Zoning of Chalous River in Different Landscapes Using Fuzzy Sets Method	245

<i>Farid Kazemnezhad</i>	
Radar Hydrology: New Z/R Relationships for Klang River Basin, Malaysia <i>Suzana R and Wardah T</i>	248
Removal of Crystal Violet and Methylene Blue from Aqueous Solution using Soil <i>Yue-Ming Chen, Tsung-Ming Tsao and Ming-Kuang Wang</i>	252
Empirical prediction on sulphide generation in Malaysian sewage <i>Harlina, A., Mohd Omar, A.K. , Norli, I. and Azni, I.</i>	255
Specific enslavement for autonomous solar system <i>Jean-Louis Canaletti, Christian Cristofari and Gilles Notton</i>	258
Presentation of two thermal models of an innovative patented solar drainpipe <i>Christian Cristofari, Gilles Notton, Fabrice Motte, Jean-Louis Canaletti and Jean Panighi</i>	264
<b>ICESE 2011 Session 7</b>	
Photocatalytic activity of sulfonamide antibiotic in aqueous suspension of TiO <sub>2</sub> -P25 <i>Tai-Wei Tzeng, Chiing-Chang Chen and Shan-Li Wang</i>	270
Analysis of Speckle Pattern Interferometry System <i>A A M Shamsir and M Z M Jafri</i>	273
Addition of <i>Rhodococcus fascians</i> AC6 to prevent inhibition of the toluene degradation from ethyl acetate in biofiltration of VOCs-contaminated air stream <i>Yi-Chen Tsai, Chi-Mei Lee, Sz-Chwun John Hwang and Meng-Yen Shih</i>	276
Pressure Drop Prediction of Square-cell Honeycomb Monolith Structure <i>Shahrin Hisham Amirnordin, Suzairin Md Seri, Wan Saiful-Islam Wan Salim, Hamimah Abd Rahman and Khalid Hasnan</i>	281
Role of In-situ Reducing Bacteria on Arsenic Mobility in Aquitard Groundwater <i>Sheng-Wei Wang and Chen-Wuing Liu</i>	286
Simulation of intermittent transient cooling load characteristic in an academic building with centralized HVAC system <i>Petrus Tri Bhaskoro, Syed Ihtsham Ul Haq Gilani and Mohd Shiraz Bin Aris</i>	291
Monitoring Surface Water Quality in Coastal Area of Penang <i>Saumi Syahreza, Mohd Zubir Mat Jafri, Lim Hwee San and Mohd Rifhan Mustapha</i>	297
Experiment Results of Conduction, Spectral Induced Polarization and Dielectric Characteristics for Chrome-Contaminated Soil <i>Yuqiang Liu, Changxin Nai, Lu Dong, Qi Wang</i>	301
Problematic Issues in Implementation of Supply Chain Management in Iranian Automotive Industries <i>Malihe Manzouri, Mohd Nizam Ab Rahman and Haslina Arshad</i>	304
Water Resources Management System for Nile River <i>Haseen Khan, Paula Dawe, Renee Paterson and Shaden Abdel-Gawad</i>	308

Analysis on the corrosion behavior of Al-alloy bipolar plate and pH value of water product for the PEMFC <i>K.H. Hou, C.H. Lin, M.D. Ger and S.W. Shiah, H.M. Chou</i>	313
Energy, Environment and Sustainability: The Challenge of Carbon Dioxide Emissions <i>Yousef Bakhbakhi</i>	318
Author Index	323