Foreword

Welcome to the Second Issue 2018 of the Journal of Science and Technology (JST)!

JST is an open-access journal for studies in science and technology published by Universiti Putra Malaysia Press. It is independently owned and managed by the university and is run on a non-profit basis for the benefit of the world-wide science community.

This issue contains 30 articles, of which five are review articles, two are case studies and 23 are regular research articles. The authors of these articles hail from several countries namely, Malaysia, the United Kingdom, Nigeria, Australia, India, Iraq, the Republic of Ghana, Iran, the Kingdom of Morocco and Thailand.

The first review article in this issue reports briefly on termite mounds as bio-indicators of groundwater, reporting on prospects and constraints (Jamilu Ahmed and Biswajeet Pradhan), while the second is on the use of waste materials in concrete (Davoud Tavakoli, Masoumeh Hashempour and Ali Heidari). The third review article is a comparative study that discusses modelling parallel programmes for static mapping (Sina Zangbari Koohi, Nor Asilah Wati Abdul Hamid, Mohamed Othman and Gafurjan Ibragimov). The next review article looks at design of a new safe operating product, and is a review of classification and opportunities related to the subject (Fatimazahra Guini, Abdellah El Barkany, Abdelouahhab Jabri and El Hassan Irhirane), while the final review article examines space medicine as the next frontier for the heart (Balasingam, M.).


The 23 regular articles cover a wide range of topics. The first article is on the evaluation of single reservoir performance for flood risk reduction using a developed simulation model, and is a case study of the Makhoul Reservoir (Yousif H. Al-Aqeeli, S. Abd Aziz, Badronnisa Yusuf and Aimrun Wayayok). The following articles look at: a comparison of goat skin and x-ray film membranes on the traditional musical instrument, the kompang (W. A. Siswanto and M. Syiddiq); an efficient method for secure 2D image visualisation and transmission through chaotic confusion and pixel diffusion (Gunasekaran, G. and Venkatesan, M.); socio-demographic factors associated with low birth weight in Nepal using imputation of missing determinants (Singh, U., Ueranantasun, A. and Kuning, M.); production of lentiviral vector with polycistronic transcripts for reprogramming of mouse fibroblast cells (Akram Al Abbar, Norshariza Nordin, Siew Ching Ngai and Syahril...
increased endothelial progenitor cells with age and grade of malignancy in astrocytic glioma patients (Priscilla Das, Nyi Nyi Naing, Nadiah Wan-Arfah, KON Noorjan, Yee Cheng Kueh and Kantha Rasalingam); synthesis, characterisation and biological activities of Ru(iii), Mo(v), Cd(ii), Zn(ii) and Cu(ii) complexes containing a novel nitrogen-sulphur macrocyclic Schiff base derived from glyoxal (Chah, C. K., Ravoof, T. B. S. A. and Veerakumarasivam, A.); the effect of pre-processing and testing methods on online Kannada handwriting recognition using signal processing and statistical techniques (S. Ramya and Kumara Shama); statistical modelling of daily rainfall variability patterns in Australia (Bright Emmanuel Owusu and Nittaya McNeil); simulation and optimisation of bioethanol purification using extractive distillation with an additive solvent (S. M. Anisuzzaman, D. Krishnaiah, A. Bono, F. A. Lahin, E. Suali and I. A. Z. Zuyyin); the feasibility of 24-hour discharge for post-laparoscopic ovarian cystectomy patients (Wan Ahmad Hazim, Nur Hidayah Aeshah Ng and Salleha Khalid); the performance comparison of classification algorithms for medical diagnosis (Anju Jain, Saroj Ratnoo and Dinesh Kumar); estimating the economic impact of climate change on agricultural water management indicators (Hayat Lionboui, Tarik Ben Abdelouahab, Fouad Elame, Aziz Hasib and Abdelali Boulli); integrated rainwater drainage system for groundwater improvement and economic benefit (Manisha D. Desai and Jayantilal N. Patel); mathematical modelling and residual life prediction of an aluminium electrolytic capacitor (Bhargava, C., Banga, V. K. and Singh, Y.); comparison extraction of peanut skin between CO\textsubscript{2} supercritical fluid extraction and Soxhlet extraction in terms of oil yield and catechin (Nicky Rahmana Putra, Mohd Azizi Che Yunus, Muhammad Syafiq Hazwan Ruslan, Zuhaili Idham and Fadillah Nur Idrus); watermelon radioprotection against radiation stress in mice (Md Saad, W. M., Mohd Nor, N. A., Abdul Razak, H. R., Mat Salleh, M. S., Abdul Rasid, A. and Hanifah, R.); utilisation of PET-CT in oesophageal cancer management from a clinician’s perspective (Abdul Razak, H. R., Azmi, N. A. and Vinjamuri, S.); a mono-window algorithm for land surface temperature estimation from Landsat 8 thermal infrared sensor data, reporting on a case study of the Beas River basin, India (Gopinadh Rongali, Ashok Kumar Keshari, Ashvin Kumar Gosain and Rakesh Khosa); application of almost an increasing sequence for the absolute Riesz |N_{p;S;Y_{k}}|\textsubscript{\textsum} factor (Sonker, Smita and Munjal, Alka); the effect of tool-pin profile on weld zone and mechanical properties in friction stir welding of the aluminium alloy (Prashant Prakash, Sanjay Kumar Jha and Shree Prakash Lal); computation of antifractals i.e. tricorns and multicorns and their complex nature (Narayan Partap, Sarika Jain and Renu Chugh) and an explicit drain current model in a subthreshold regime for the graded channel Schottky barrier gate all around MOSFET to improve analog/RF performance (Suman Sharma, Rajni Shukla and Malay Ranjan Tripathy).

I anticipate that you will find the evidence presented in this issue to be intriguing, thought-provoking and useful in setting new milestones. Please recommend the journal to your colleagues and students to make this endeavour meaningful.
All the papers published in this edition underwent Pertanika’s stringent peer-review process involving a minimum of two reviewers comprising internal as well as external referees. This was to ensure the quality of the papers justified the high ranking of the journal, which is renowned as a heavily-cited journal not only by authors and researchers in Malaysia but by those in other countries around the world as well.

I would also like to express my gratitude to all the contributors, namely, the authors, reviewers and editors for their professional contribution towards making this issue feasible.

JST is currently accepting manuscripts for upcoming issues based on original qualitative or quantitative research that opens new areas of inquiry and investigation.

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