

# Foreword

Welcome to the **Second Issue 2014** 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.

In this issue, **23 articles** are published, out of which **one** is an invited review, **two** are review articles, **13** are regular articles and **one** is a case report. **Six articles** are from Curtin University's Technology, Science and Engineering International Conference "Engineering Goes Green" (CUTSE 2012). The authors of these articles vary in country of origin, coming from **Malaysia, Japan, Nigeria, India, Singapore and Ireland**.

The invited review is an in-depth discussion of bifurcation/chaos and its practical relevance to chemical and biological systems (*Said S. E. H. Elnashaie*). The first review article in this issue discusses plate solar collectors and applications (*Bande, Y. M. and Mariah, N. A.*) while the second review article is on the development of vaccination strategies from BCG to new vaccine candidates (*Nadiya T. Al-alusi and Mahmood A. Abdullah*).

The regular articles cover a wide range of study. The first paper is on comparison of physical activity prevalence among government employees in Kangar, Perlis, Malaysia using an international physical activity questionnaire (IPAQ) that measures steps/day based on an accelerometer (*Hazizi, A. S., Zahratul Nur, K., Mohd Nasir, M. T., Zaitun, Y. and Tabata, I.*). The following articles look at: hypothesis tests of goodness-of-fit for Fréchet distribution (*Abidin, N. Z., Adam, M. B. and Midi, H.*); distribution of recent Ostracoda in offshore sediment of the South China Sea (*Ramlan, O. and Noraswana, N. F.*); empirical correlation of refrigerant HC290/HC600a/HFC407C mixture in adiabatic capillary tube using statistical experimental design (*Shodiya, S., Azhar, A. A. and Darus, A. N.*); identification of hot spots in proteins using modified gabor wavelet transform (*D. K. Shakya, Rajiv Saxena and S.N. Sharma*); self-care behaviour among type 2 diabetes patients (*Siti Khuzaimah, A. S., Aini, A., Surindar Kaur, S. S., Hayati Adilin, M. A. M. and Padma, A. R.*); a reduced  $\tau$ -adic Naf (RTNAF) representation for an efficient scalar multiplication on anomalous binary curves (ABC) (*Faridah Yunos, Kamel Ariffin Mohd Atan, Muhammad Rezal Kamel Ariffin and Mohamad Rushdan Md Said*); relevance of integrated geophysical methods for site characterisation in the construction industry – a case of Apa in Badagry, Lagos State, Nigeria (*K. S. Ishola, L. Adeoti, F. Sawyerr and K. A. N Adiat*); antimicrobial activities of three different seed extracts of *Lansium* varieties (*H. Alimon, A. Abdullah Sani, S. S. Syed Abdul Azziz, N. Daud, N. Mohd Arriffin and Y. Mhd Bakri*); a study on the performance of multivariate exponentially weighted moving average (MEWMA) and multivariate synthetic charts (*Ellappan, S. and Khoo Michael, B. C.*); an experimental and modelling study of selected heavy metal removal from aqueous

solution using *Scylla serrata* as biosorbent (Aris A. Z., Ismail F. A., Ng, H. Y. and Praveena, S. M.); Bayesian network classification of gastrointestinal bleeding (Nazziwa Aisha, Mohd Bakri Adam, Shamarina Shohaimi and Aida Mustapha); removal of toluene from aqueous solutions using oil palm shell based activated carbon: equilibrium and kinetics study (Kwong, W. Z., Tan, I. A. W., Rosli, N. A. and Lim, L. L. P.) and one case report on the delay in diagnosis of lung cancer (Ching, S. M., Chia, Y. C. and Cheong, A. T.).

I conclude this issue with six articles arising from the CUTSE 2012 international conference: intelligent monitoring interfaces for coal-fired power plant boiler trips: a review (Nistah, N. N. M., Motalebi, F., Samyudia, Y. and Alnaimi, F. B. I.); storm runoff pollution from a residential catchment in Miri, Sarawak (Ho, C. L. I. and Choo, B. Q.); septage treatment using pilot vertical-flow engineered wetlands system (Jong, V. S. W. and Tang, F. E.); improvement of engineering properties of peat with palm oil clinker (M. E. Rahman, M. Leblouba and V. Pakrashi); optimisation and analysis of bioethanol production from cassava starch hydrolysis (Liew, E. W. T.); and numerical modelling of molten carbonate fuel cell: effects of gas flow direction in anode and cathode (Tay C. L. and Law M. C.).

I anticipate that you will find the evidence presented in this issue to be intriguing, thought-provoking, and, hopefully, useful in setting up new milestones. Please recommend the journal to your colleagues and students to make this endeavour meaningful.

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. Last but not least, the editorial assistance of the journal division staff is fully appreciated.

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

**Chief Executive Editor**

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