

# Foreword

Welcome to the **First Issue 2014** of the Journal of Science and Technology (JST)!

JST is an open-access journal for the 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, **26 articles** are published, out of which **one** is a review article, **one** is a short communication and **19** are regular articles. **Four articles** are from Curtin University Technology, Science and Engineering International Conference “Innovative Green Technology for Sustainable Development” (CUTSE 2011). The authors of these articles vary in country of origin, coming from Malaysia, India, Germany and Australia.

The review article discusses a potential of Bi-Ag as an alternative high temperature solder, in search of lead-free solder replacement (*Rohaizuan Rosilli, Azmah Hanim Mohamed Ariff and Shahrul Fadzli Muhamad Zam*). The short communication proposes a method that uses chirp signal as a training sequence and employs fractional Fourier transform (FRFT) as a tool to localise the training sequence (chirp) received by the Orthogonal Frequency Division Multiplexing (OFDM) system (*Saxena, R. and Joshi, H. D.*).

The regular articles cover a wide range of study, and include the following: a new recursive circular algorithm for listing all permutations (*Sharmila Karim, Zurni Omar, Haslinda Ibrahim, Khairil Iskandar Othman and Mohamed Suleiman*); a comparative study of Yttrium-doped ceria ceramics synthesised using mechanochemical and solid state methods (*Ong, P. S., Tan, Y. P., Taufiq-Yap, Y. H. and Zainal, Z.*); design and development of a sweet potato digging device (*Md. Akhir, H., Ahmad, D., Rukunudin, I. H., Shamsuddin, S. and A. Yahya*); vegetative swales for treatment of stormwater runoff from construction sites (*Ismail, A. F., Sapari, N. and Abdul Wahab, M. M.*); The Performance of Robust Modification of Breusch-Godfrey Test in the Presence of Outliers (*Lim, H. A. and Midi, H.*); physical properties of liberica coffee (*Coffea liberica*) berries and beans (*Ismail, I., Anuar, M. S. and Shamsudin, R.*); a descriptive report on glycaemic control and treatment profile among 20646 adult type 2 diabetes mellitus (*Chew, B. H., Lee, P. Y., Mastura, I., Cheong, A. T., Sri Wahyu, T. and Zaiton, A.*); development of internet-based instrumentation for the study of the hall effect (*Ariffin Abas, Abdul Halim Shaari, Zainal Abidin Talib and Zaidan Abdul Wahab*); *in-vitro* antidermatophytic activity of methanolic fractions from *Entada spiralis* Ridl. stem bark and its bioautographic profile (*Aiza Harun, Siti Zaiton Mat So'ad, Norazian Mohd Hassan and Neni Kartini Che Mohd Ramli*); assessment of digital cameras in mapping meandering flumes using close range photogrammetric technique (*Udin, W. S., Ahmad, A. and Ismail, Z.*); correlation of electrical resistivity with some soil parameters for the development of possible prediction of slope stability and bearing capacity of soil using electrical parameters (*Syed Baharom Syed Osman, Mohammad Nabil Fikri and Fahad Irfan Siddique*); chemically modified sago waste for oil absorption

(Zainab Ngaini, Rafeah Wahi, Dayang Halimatulzahara and Nur An-Nisaa' Mohd Yusoff); chemical constituents of *Aglaia lanuginosa* (Kamarulzaman, F. A., Mohamad, K., Awang, K. and Lee, H. B.); preconditioned subspace Quasi-Newton method for large scale optimisation (Hong Seng Sim, Wah June Leong, Malik Abu Hassan and Fudziah Ismail); GIS routing and modelling of residential waste collection for operational management and cost optimisation (Billa, L., Pradhan, B. and Yakuup, A.); performance evaluation and characteristics of selected tube wells in the coastal alluvium aquifer, Selangor (Fauzie, M. J., Azwan, M. M. Z., Hasfalina, C. M. and Mohammed, T. A.); optimisation of modified Fenton (FeGAC/H<sub>2</sub>O<sub>2</sub>) pretreatment of antibiotics (Augustine Chioma Affam, Malay Chaudhuri and Shamsul Rahman Mohammed Kutty); microclimate inside a tropical greenhouse equipped with evaporative cooling pads (Diyana Jamaludin, Desa Ahmad, Rezuwan Kamaruddin and Hawa Z. E. Jaafar); and the use of computational fluid dynamics in the determination of solar collector orientation and stack height of a solar induced ventilation prototype (Yusoff, W. F. M., Sapian, A. R., Salleh, E., Adam, N. M., Hamzah, Z. and Mamat, M. H. H.).

I conclude this issue with four articles arising from the CUTSE 2011 international conference: Full-scaled impulse turbine performance prediction using numerical simulation (A. Sahed and F. B. Ismail Alnaimi); sorption of SO<sub>2</sub> and NO by modified palm shell activated carbon: Breakthrough curve model (Sumathi, S., S. Bhatia, K. T. Lee and A. R. Mohamed); geochemical assessment of sediment quality using multivariate statistical analysis of Ennore Creek, north of Chennai, SE coast of India (M. Jayaprakash, R. Nagarajan, P. M. Velmurugan, L. Giridharan, V. Neetha and B. Urban); and a preliminary investigation on electrochemical parameters of lake waters in and around Miri city, Malaysia (M. V. Prasanna, R. Nagarajan, A. Elayaraja and S. Chidambaram).

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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