

Foreword

Welcome to the **First Issue 2017** 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 **31 articles**, of which **ten** are regular research articles. This issue also features **seven** selected papers from the World Research & Innovation Convention in Engineering and Technology 2014 (WRICET 2014), **nine** papers were chosen from the International Conference on Computational Methods in Engineering & Health Sciences (ICCMEH 2015) and **five** papers from the International Conference of Translational Molecular Imaging (ICTMIPs 2016). The authors of these articles vary in country of origin, coming from **Malaysia, New Zealand, Canada, Japan, India, North Africa, United Kingdom, Australia and Iraq**.

The regular articles cover a wide range of topics. The first article is on the analysis on the effect of shop floor parameters on the effectiveness of preventive maintenance through discrete event simulation (*Sheng, L. W., Basri, E. I. and Kamaruddin, S.*). The following articles look at: the analysis of energy consumption in pineapple cultivation in Malaysia (*Nazri, A. M. and Pebrian, D. E.*); a combined analytical method for optimal location and sizing of distributed generation considering voltage stability and power loss in a power distribution system (*Maryam Mirzaei, Jasronita Jasni, Hashim Hizam, Noor Izzri Abdol Wahab and Ehsan Moazami*); a novel adaptive neuro fuzzy inference system based classification model for heart disease prediction (*Abdu Masanawa Sagir and Saratha Sathasivam*); an ID-based secure and flexible buyer-seller watermarking protocol for copyright protection (*Ashwani Kumar, S. P. Ghreera and Vipin Tyagi*); modified Kohonen network algorithm for selection of the initial centres of Gustafson-kessel algorithm in credit scoring (*Sameer, F. and Abu Bakar, M. R.*); wireless sensor network and internet of things (IoT) solution in Agriculture (*Zulkifli, C. Z. and Noor, N. N.*); a comparative study of the behaviour of treated and untreated tyre crumb mortar with Oil palm fruit fibre addition (*Farah N. A. Abd. Aziz, Sani M. B., Noor Azline M. N. and Jaafar M. S.*); Diabetes knowledge, attitudes, self-management, and quality of life among people with type 2 diabetes mellitus – a comparison between Australia- and Malaysia-based samples (*Yee Cheng Kueh, Tony Morris and Aziz-Al-Safi Ismail*); and hybrid genetic algorithm in the Hopfield network for Logic Satisfiability problem (*Mohd Shareduwan Mohd Kasihmuddin, Mohd Asyraf Mansor and Saratha Sathasivam*).

I conclude this issue with 21 articles arising from the **WRICET 2014, ICCMEH 2015** and **ICTMIPs 2016** international conferences: maximising potential of methane production from biogas for power generation (*Tinia Idaty, Mohd Ghazi and Ismail, Muhammad*

Nasir); anaerobic batch digestion of cattle manure under various oscillatory flow mixing (*Ismail, Muhammad Nasir, Tinia Idaty, Mohd Ghazi, Rozita, Omar and Wan Azlina, Wan Abd Karim Ghani*); car annual vehicle Kilometer travelled estimated from car manufacturer data – an improved method (*A, Shabadin, N, Megat Johari and H, Mohamed Jamil*); intelligent surveillance system for street surveillance (*Y. M. Mustafah, N. A. Zainuddin, M. A. Rashidan, N. N. A. Aziz and M. I. Saripan*); modelling the effect of sediment coarseness on local scour at wide bridge piers (*Nordila, Ahmad Thamer, Mohammad, Melville, Bruce W., Faisal, Ali and Badronnisa, Yusuf*); electromyography analysis during lifting tasks: a pilot study (*Siti Anom, Ahmad, Nor Hafeezah, Kamarudin, Rosnah, Mohd Yusoff, Mohd Khair, Hassan and Siti Zawiah, Md Dawal*); anaerobic digestion of domestic wastewater in different salinity levels: the adaptation process (*Syazwani, Idrus, Nik Norsyahariati, Nik Daud and Amimul Ahsan*); experimental and numerical study of the heat transfer characteristics of aluminium metal foam (with/without channels) subjected to steady water flow (*Bayomy, A. M. and Saghir, M. Z.*); molecular dynamics study of the diffusion behaviour of Li in $\text{Li}_{10}\text{GeP}_2\text{S}_{12}$ (*Kawano, S. and Iikubo, S.*); temperature measurement and optimisation in machining magnesium alloy using RSM and ANOVA (*Viswanathan R, Ramesh S, Elango N and Kamesh Kumar D*); clique regular graphs (*Bhat, R. S., Bhat, Surekha, R., Bhat, Smitha, G. and Udupa, Sayinath.*); multi-band, multi-mode microstrip filters for RF, WLAN, WIMAX, and wireless communication by using stepped impedance resonator (SIR) (*Mohammed K. A. and Ratna K. Z. S.*); wireless structural health monitoring (shm) system for damage detection using ultrasonic guided waveform response (*A. H. S. Shirazi, M. K. H. Muda, M. J. Thirumurthy and F. Mustapha*); yawing force of electric trimmers of a hybrid buoyant aerial vehicle (*Haqae, A. U., Asrar, W., Omar, A. A., Sulaeman, E. and Ali, J. S. M.*); impact characterisation of glass fibre-reinforced polymer (GFRP) type c-600 and e-800 using a single stage gas gun (SSGG) (*Syafiqah Nur Azrie, S., Mohamed Thariq, H. S. and Francisco, C.*); drop-weight impact test on laminated composite plate of flax (*linum usitatissimum*) using rice husk ash from paddy (*Oryza Sativa*) as a natural binder (*M. S. Yaakob, N. A. Z. Abidin, M. N. Abdullah, M. K. H. Muda and F. Mustapha*); different germanium dopant concentration and the thermoluminescence characteristics of flat ge-doped optical fibres (*Muhammad Safwan Ahmad Fadzil, Ung Ngjie Min, David Andrew Bradley and Noramaliza Mohd Noor*); characterization of adnexal masses using multidetector contrast-enhanced CT scan – recognising common pitfalls that masquerade as ovarian cancer (*Suppiah S, Kamal SH, Mohd Zabid AZ and Abu Hassan H*); botox injections to the face: a mimic of richter's transformation (*Shafik-Eid, R, Nandurkar, D and Ramdave, S*); one-time prolonged ultrasound exposure during early pregnancy affects bone strength in young aged *Oryctolagus cuniculus* (*Che Isa, I. N., Md Dom, S., Abdul Razak, H. R. and Hashim, U. F.*); and popliteal artery to tibial plateau distance at the knee level: a radiological study to assess injury risks in osteoarthritic knees using dual source dual energy CT scan (*Ezamin, A. R., Hasyma, A. H., Suppiah, S., Suriani, M. S., Arifaizad, A., Paisal, Hussin., Nasir, M. Nizlan., Sidique, S. F. and Hariati, J.*).

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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