Foreword

Welcome to the Fourth 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 run on a non-profit basis for the benefit of the world-wide science community.

This issue contains 30 regular articles. The authors of these articles come from different countries, namely Malaysia, Indonesia, Iran, Iraq, Nigeria, India, Algeria, Turkey and France. India alone contributed 17 articles, the highest number of articles.

Articles submitted in this issue cover various scopes of Science and Technology including applied sciences and technologies, chemical sciences, earth sciences, engineering sciences, environmental sciences, information, computer and communication technologies and mathematical sciences.

Two articles are selected from the most favourable scope in this issue (information, computer and communication technologies). One is an article entitled "Automatic Annotation of Educational Videos for Enhancing Information Retrieval" by *Poornima, N.* and *Saleena, B.*, fellow researchers from School of Computing Science and Engineering, VIT Chennai, India. The article discussed the accessibility of educational videos as one of the best measn in imparting knowledge to learners. The study aimed to extract keywords from videos and to find association between the extracted terms. The study had proven the effectiveness of the proposed approach based on the experimentations done on actual videos set. Details of the study is available on page 1571.

The other one selected from the same scope is an article entitled "WBMFC: Efficient and Secure Storage of Genomic Data" by *Sanjeev Kumar, Suneeta Agarwal* and *Ranvijay*, fellow researchers from Department of Computer Science and Engineering, MNNIT Allahabad, India. The article proposed an approach of applying encryption during compression to efficiently and securely store massive genomic data in fasta/multi-fasta file format. The study showed that the proposed algorithm (WBMFC) outperformed the state of the art algorithms in terms of processing time and compression ratio both. Insight of the article is available on the page 1913.

Selected from the scope of mathematical science is an article entitled "Statistical Estimators as an Alternative to Standard Deviation in Weighted Euclidean Distance Cluster Analysis" by *Paul Inuwa Dalat*u and *Habshah Midi*, fellow researchers from Adamawa State University, Nigeria and Universiti Putra Malaysia (UPM), Malaysia, respectively. The

article focused on clustering, one of the major sources of primary data mining tools. The study suggested two methods to overcome the weakness of Standard Weighted Euclidean Distance method used for clustering. It was proven that the proposed methods (namely *Qn* and *Sn* Weighted Euclidean Distance) evidently outperformed the existing methods. The details of the study is available on page 1823.

Selected from the scope of engineering sciences is an article entitled "Experimental Investigations and Exergetic Assessment of 1 kW Solar PV Plant" by *Ranjana Arora* and *Rajesh Arora*, fellow researchers from Amity University Haryana, India. The study aimed to assess the performance/efficiency of the plant in their respective institution. The study applied two exergy techniques based on concepts of thermodynamics and chemical/photonic energy of input solar insolation. The study concluded that SPV systems were direct energy conversion devices which were eco-friendly and environmentally sustainable sources of energy that could yield huge amount of power at minimum operating/maintenance cost. The details of the study is available on page 1881.

We anticipate that you will find the evidence presented in this issue to be intriguing, thought-provoking and useful in reaching new milestones in your own research. 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 that 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.

In the last 12 months, of all the manuscripts processed, 36% were accepted. This seems to be the trend in Pertanika Journals.

We would also like to express our gratitude to all the contributors, namely the authors, reviewers and editors, who have made this issue possible.

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
Prof. Dato' Dr. Abu Bakar Salleh
executive_editor.pertanika@upm.my