Foreword

Welcome to the 1st 2021 issue of the Pertanika Journal of Science and Technology (PJST)!

PJST 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 for the benefit of the world-wide science community.

This issue contains 37 articles; 3 review articles, 1 short communication and the rest are regular articles. The authors of these articles come from different countries namely Bangladesh, India, Indonesia, Iraq, Kenya, Malaysia, Nigeria, Pakistan and Thailand.

Articles submitted for 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; material sciences; mathematical sciences; and medical and health sciences.

An article in this issue discussed the comparison between a proportional-integral controller, low pass filters, and the linear quadratic regulator in dealing with the task of eliminating harmonic currents in the grid-connected photovoltaic system. The DC/DC converter was controlled by perturb and observed technique with maximum power point tracking that concentrated on maximizing the available solar power and maintained an acceptable efficiency around the full load condition. The simulation results obtained had proven the robustness of the linear quadratic regulator over proportional-integral controller and low pass filters. The total harmonic distortion found in the grid current fell from 7.85% to 2.13% when the linear quadratic regulator was applied. Details of this study are available on page 59.

A regular article titled “Performance Analysis of the Linear Launcher Motor via Modelling and Simulation for Light Electric Vehicles” was presented by Norramlee Mohamed Noor and his colleagues. In this study, the analytical method to predict the linear launcher motor was described by using 2D-Jmag and MATLAB/Simulink. The performance of the linear launcher motor can generate axial force, speed, and displacement of with and without load. The authors stated that the maximum force without load was ~1.6kN and force with load was ~1.4kN at 100A. The detailed information of this study is available on page 95.

An investigation to determine a multi-epitope based vaccine candidate against Human Adenovirus Type B3 (HAdV-B3) respiratory infections by utilising various immunoinformatic approaches was conducted by Somnath Panda and co-researchers from AIMST University, Malaysia. Considering

the heterogeneity of HAdV-B3 and the complexity of generating conventional vaccines, an in-silico multi-epitope vaccine construct incorporating all epitopes of four major HAdV-B3 hexon variants was built. The constructed vaccine had 23 different epitopes which showed non-allergic but antigenic nature with 30hours of half-life in vitro and exhibited thermostable nature. The researchers believed that this construct would considerably reduce the time and expense of biological work needed for future vaccine development. Further details of the investigation can be found on page 607.

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 is to ensure that the quality of the papers justifies 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.

A special appreciation to all the Editorial Board Members of PJST (2018-2020) for serving the journal for the past two years in ensuring Pertanika plays a vital role in shaping the minds of researchers, enriching their lives, and encouraging them to continue their quest for new knowledge. Also, we welcome the new Editorial Board Members on board. We hope that their involvement and contributions towards Pertanika would not only improve its quality but also support the development efforts in making it an international journal of good standing.

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