

ESTEEM Academic Journal

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Universiti Teknologi MARA, Cawangan Pulau Pinang

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FOREWORD

Welcome to the 18th Volume of ESTEEM Academic Journal for March 2022 issue: an online peer-referred academic journal by Universiti Teknologi MARA, Cawangan Pulau Pinang, which focusing on innovation in science and technology that covers areas and disciplines of Engineering, Computer and Information Sciences, Health and Medical Sciences, Cognitive and Behavioral Sciences, Applied Sciences and Application in Mathematics and Statistics.

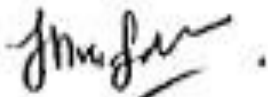


It is a pleasure to announce that ESTEEM Academic Journal has been successfully indexed in Asean Citation Index and MyCite, a significant move, which will increase the chance for this journal to be indexed in SCOPUS.

Starting year of 2021, ESTEEM Academic Journal is published biannually in March and August every year. For this March 2022 issue, ESTEEM Academic Journal have received tremendous supports and responses from authors internationally and locally from various backgrounds in science and technology areas. Fifteen articles from the field of innovation in science and technology are successfully published after undergoing screening and reviewing processes that involved international and local reviewers. It is our aim to ensure that all the published articles are of the highest quality.

It is an honour to have a form of partnership and assistance from panel of international advisors and editors for this issue. Thus, I would like to take this opportunity to thank many people who have worked together for the issue to be released. In particular, my greatest thanks are due to our Rector, Professor Ts. Dr Salmiah Kasolang and the Deputy Rector of Research, Industry, Community and Alumni Network, Associate Professor Dr. Kay Dora Abd Ghani for their unfailing support and advice towards the successful publication of this issue. My deepest gratitude also goes to the editorial team of ESTEEM Academic Journal March 2022; Dr Syarifah Adilah, Dr Ainorkhilah, Puan Suzana, Dr Mah Boon Yih, Dr Isma Noornisa, Dr Salina, Dr Vicinisvarri Inderan, Pn Nazima and Pn Marni for their support, commitment and expertise in making this issue published on time.

My greatest appreciation also goes to the panel of reviewers for their persevering and attentive efforts in reviewing the articles voluntarily by giving constructive and invaluable comments to ensure the quality of the articles. Finally, my gratitude goes out to the authors who have submitted articles to ESTEEM Academic Journal, for their trust in us in publishing their research works.



Ir Dr Nor Salwa Damanhuri
Chief Editor
ESTEEM Academic Journal

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