

This is a special issue “MathTech 2020 - Sustainable Development of Mathematics & Mathematics in Sustainability Revolution” Guest Edited by Drs. Wen Chean Teh, Sek Siok Kun, Nur Nadiah Abd Hamid, and Mohd Shareduwan Bin Mohd Kasihmuddin.

The virtual International Conference on Mathematical Sciences & Technology 2020 (MathTech 2020) was organized by the School of Mathematical Sciences, Universiti Sains Malaysia, December 8 – 10, 2020, in Penang, Malaysia, with theme Sustainable Development of Mathematics & Mathematics in Sustainability Revolution. This special issue is a collection of outstanding papers from MathTech 2020 that have undergone further proper review. Special thanks to the Dean, Professor Dr. Hailiza Kamarulhaili, and the chair of MathTech 2020, Dr. Ahmad Lutfi Amri Ramli, for their mentor advice and support.

The following are synopses of the guest editors:

Dr. Wen Chean Teh graduated from Ohio State University, under the mentorship of Timothy Carlson. Since joining Universiti Sains Malaysia in early 2013, he has successfully published 40 ISI/Scopus papers as the main or corresponding author in the areas of logic, combinatorics, and theoretical computer science. He has been the principal investigator of five research grants, including national grants twice. He received the best article award from the Malaysian Mathematical Sciences Society and the Phil Huneke Excellence in Teaching Award from Ohio State University. He is a reviewer for Elsevier and Springer journals, including Discrete Mathematics, Information and Computation, Theoretical Computer Science, Discrete Applied Mathematics, and Acta Informatica, as well as Mathematical Reviews of the American Mathematical Society. He is a descendant of well-known logician Alfred Tarski and his Erdős number is four. His current research interests are in graph burning, reaction systems, Parikh matrices, and discrete location problem. He has also contributed towards Ramsey algebras especially, bipartite permutation graphs, as well as the freeness problem. He was an oral presenter in the International Congress of Mathematicians in both Seoul 2014 and Rio de Janeiro 2018. He was the chief editor of MathTech 2020 and the leader of the program committee of MathTech 2018.

Associate Professor Dr. Sek Siok Kun earned her Ph.D in Quantitative Economics from Christian-Albrechts Universität zu Kiel, Germany under the fellowship program (ASTS) awarded by Universiti Sains Malaysia (USM). She completed the Advanced Studies Program (ASP) organized by the Kiel Institute for The World Economy (IFW), Germany and currently is the alumni of ASP. She joined the School of Mathematical Sciences at Universiti Sains Malaysia in 2010 as a Senior Lecturer and was promoted to Associate Professor in 2017. Dr. Sek's research areas include econometrics, monetary policy analysis, panel data and nonlinear regression, energy and macroeconomics analysis. She has publications in established journals, including Energy, Energy and Environment, Panoeconomicus and Statistika. She has served as a panel reviewer for many journals including Energy, Energy Economics, Heliyon, Australian Economic Papers, EconomiA, Sage Open and The Singapore Economic Review. Besides, she also involves actively in research activities, being a Principal Investigator for several university and national grants and has served as a grant assessor.

Dr. Nur Nadiah Abd Hamid earned her Ph.D. in Mathematics from Universiti Sains Malaysia (USM). She currently serves as a Senior Lecturer in USM. She is also an Associate Editor of the Bulletin of the Malaysian Mathematical Sciences Society. Her research areas include Numerical Analysis and Computer-Aided Geometric Design (CAGD). Her focus is in incorporating curves and surfaces from CAGD into the development of numerical schemes to solve various types of differential equations. This work was documented in more than 30 journal articles and proceedings papers.

Dr. Mohd Shareduwan Bin Mohd Kasihmuddin earned his Ph.D. in Mathematics from Universiti Sains Malaysia (USM). He is currently serving as a Senior Lecturer in USM. He is a reviewer for several prominent journals such as Neural Networks, Neurocomputing and Applied Soft Computing. His research areas include Logic Programming, Artificial Neural Network (ANN), and Metaheuristics Algorithm. His focus is in incorporating symbolic rules into ANN with the aid of Metaheuristics Algorithm. This work was documented in more than 55 journal articles and proceedings papers.