

The Malaysian Journal of Computing (MJoC)
Faculty of Computer and Mathematical Sciences
Volume 9, Issue 1
April 2024

Malaysian Journal of Computing (MJoC)

Vol. 9, Issue 1, April 2024



M J O C

MALAYSIAN JOURNAL OF COMPUTING

eISSN: 2600-8238

ISSN: 2231-7473

MJoC MALAYSIAN
JOURNAL OF COMPUTING



ABOUT THE JOURNAL

The Malaysia Journal of Computing (MJoC) is an open on-line peer-reviewed international journal managed by the Faculty of Computer & Mathematical Sciences, Universiti Teknologi MARA (UiTM). It is an open access journal, and all the articles are free to read. MJoC adheres to the Creative Common Attribution-ShareAlike 3.0 Unported License, which allows users to share, adapt, and redistribute content responsibility while giving due credit to the original authors. MJoC provides a platform for the dissemination of original research across the broad spectrum of computing.

EDITORIAL BOARD

EDITOR-IN-CHIEF

Professor Ts Dr Hj. Anitawati Mohd Lokman

MANAGING EDITOR

Ts Dr. Maslina Abdul Aziz

EDITORS

Dr. Abdul Kadir Jumaat

Dr. Azimah Khalid

Dr. Norshahida Shaadan

Dr. Nur'Aina Daud

Dr. Nurain Ibrahim

Dr. Nurbaizura Borhan

Associate Professor Dr. Sayang Mohd Deni

Dr. Siti Khatijah Nor Abdul Rahim

Ts. Dr. Suhaila Abd Halim

INTERNATIONAL EDITORIAL BOARD

Professor Dr. Toshio Tsuchiya, Shimonoseki City University, Japan

Professor Ir Dr. Marijn Janssen, TU Delft, Netherlands

Professor Naci Karkin, Pamukkale University, Turkey|United Nations University (UNU), Portugal

Professor Dr. Tanka Nath Dhamala, Tribhuvan University, Nepal

Associate Professor Dr. Hideyoshi Yanagisawa, The University of Tokyo

Associate Professor Dr. Norshidah Mohamed, Prince Sultan University, Saudi Arabia

Associate Professor Dr. Shirley Yvonne Coleman, Newcastle University

Dr. Permanand Mohan, The University of the West Indies

Dr. Wahyu Wiromo, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

©2023, UiTM Press, Universiti Teknologi MARA
All right reserved.

CONTACT US

Website: <https://mjoc.uitm.edu.my>

e-mail: mjoc@uitm.edu.my

Tel: +603-5543 5329

Fax: +603-5543 5501