



Proceedings of Science and Mathematics

Faculty of Science,
Universiti Teknologi Malaysia

UNIVERSITI TEKNOLOGI MALAYSIA
FACULTY OF SCIENCE
SCIENCE AND MATHEMATICS

PROCEEDINGS OF SCIENCE AND MATHEMATICS

VOLUME 18, OCTOBER 2023

2023

FACULTY OF SCIENCE, UNIVERSITI TEKNOLOGI MALAYSIA

<https://science.utm.my/procscimath>

eISSN 2756-8857



9 772756 885002



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

FACULTY OF SCIENCE

<https://science.utm.my/>

Guest Editors:

Siti Mariam Norrulashikin

Noraslinda Mohamed Ismail

Mohd Ali Khameini Ahmad

**Department of Mathematical Sciences, Faculty of Science,
Universiti Teknologi Malaysia**