

## Journal of Mathematical and Fundamental Sciences

*Journal of Mathematical and Fundamental Sciences* welcomes full research articles in the area of Mathematics and Natural Sciences from the following subject areas: Astronomy, Chemistry, Earth Sciences (Geodesy, Geology, Geophysics, Oceanography, Meteorology), Life Sciences (Agriculture, Biochemistry, Biology, Health, Medical, Pharmacy), Mathematics, Physics, and Statistics. Authors are invited to submit articles that have not been published previously and are not under consideration elsewhere.

Starting from Vol. 1, No. 1, 1961, full articles published are available online at <http://journals.itb.ac.id>, and indexed by Scopus, Web of Science (Emerging Sources Citation Index), Scimago JR, Directory of Open Access Journals (DOAJ), Google Scholar, Index Copernicus, The Elektronische Zeitschriftenbibliothek (EZB) by University Library of Regensburg, EBSCO Open Science Directory, ASEAN Citation Index, Indonesian Publication Index (IPI), Science and Technology Index (SINTA) and Chemical Abstract Service (CAS).

### Publication History

#### Currently known as:

Journal of Mathematical and Fundamental Sciences

#### Formerly known as:

- ITB Journal of Science (2008 – 2012)
- Proceedings ITB Sains dan Teknologi (2003 - 2007)
- Proceedings ITB (1961 - 2002)

### Editorial board of Journal of Mathematical and Fundamental Sciences

|                                                                                                                                           |                                                                                                                                                       |                                                                                           |                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Chief Editor</b><br>Agustinus Agung<br>Nugroho Sulistyio<br>Hutomo<br>Faculty of Mathematics<br>and Natural Sciences<br>ITB, Indonesia | Ferry Iskandar<br>Faculty of Mathematics<br>and Natural Sciences ITB,<br>Indonesia                                                                    | Ram N. Mohapatra<br>Department of<br>Mathematics<br>University of Central<br>Florida, USA | Edy Soewono<br>Faculty of Mathematics<br>and Natural Sciences<br>ITB, Indonesia       |
| <b>Editorial Board</b><br>Edy Tri Baskoro<br>Faculty of Mathematics<br>and Natural Sciences<br>ITB, Indonesia                             | Ismunandar<br>Faculty of Mathematics<br>and Natural Sciences ITB,<br>Indonesia                                                                        | James Mori<br>Disaster Prevention<br>Research Institute<br>Kyoto University, Japan        | Yana Maolana Syah<br>Faculty of Mathematics<br>and Natural Sciences<br>ITB, Indonesia |
| Neville Fowkes<br>School of Mathematics<br>& Statistics, University<br>Western Australia.                                                 | Brendan J. Kennedy<br>School of Chemistry,<br>University of Sydney,<br>Australia                                                                      | Rino R. Mukti<br>Faculty of<br>Mathematics and<br>Natural Sciences ITB,<br>Indonesia      | Daryono Hadi Tjahjono<br>School of Pharmacy<br>ITB, Indonesia                         |
| Thomas Götz<br>Mathematisches Institut<br>Universität Koblenz-<br>Landau, Germany                                                         | Hans-Dieter Liess<br>Faculty Electrical<br>Engineering and<br>Information Technology,<br>University of the Federal<br>Armed Forces Munich,<br>Germany | Tati S. Sjamsudin<br>School of Life Sciences<br>and Technology ITB,<br>Indonesia          | Sri Widiyantoro<br>Faculty of Mining and<br>Petroleum Engineering<br>ITB, Indonesia   |

Publication assistant: Dini Sofiani Permatasari & Budhi Mulyawan Rachmat. Address: *ITB Journal Publisher*, LPPM ITB, Center for Research and Community Services (CRCS) Building 6<sup>th</sup> & 7<sup>th</sup> Floor, Jl. Ganesha No. 10 Bandung 40132, Indonesia, Tel. +62-(022)-86010080, Fax.: +62-(022)-86010051; e-mail: [jmfs@lppm.itb.ac.id](mailto:jmfs@lppm.itb.ac.id).

Distribution: Distributed to other universities and research institutions for exchange publications, and to regular subscribers.

Subscription per issue: Rp 100.000,- (domestic) and \$50 (overseas). Order form for subscription should be sent to the editorial office.

Reg. No. 691-SIC-UPPGT-SIT-1963, Accreditation No. 040/P/2014 (Februari 2014-Februari 2019)

Published by *ITB Journal Publisher*, The Institute for Research and Community Services, Institut Teknologi Bandung (ITB) in collaboration with Indonesian Chemical Society (Himpunan Kimia Indonesia-HKI).

Cover Design by Chandra Tresnadi.

---

**Table of Contents**


---

|                                                                                                                                                                                                                                    |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 1. Some New Operations of $(\alpha, \beta, \gamma)$ Interval Cut Set of Interval Valued Neutrosophic Sets<br>Mehmet Şahin, Vakkas Uluçay & Merve Menekşe                                                                           | 103 |
| 2. Decision Tree-Based Classification Model for Identification of Effective Leadership Indicators<br>Bekesiene Svajone & Hoskova-Mayerova Sarka                                                                                    | 121 |
| 3. Generalization of Slightly Compressible Modules<br>Samruam Baupradist, Phatsarapa Janmuang & Suphawatt Asawasamrit                                                                                                              | 142 |
| 4. Introduction of Interpolation and Extrapolation Model in Lanczos-type Algorithms $A_{13}/B_6$ and $A_{13}/B_{13}$ to Enhance their Stability<br>Maharani, Abdellah Salhi & Rifka Amelia Suharto                                 | 148 |
| 5. Study on Estimates of Travel Distance, Velocity and Potential Volume of Amahusu Sliding Plane using Energy Conservation Approach in Conjunction with Geoelectric Survey<br>Matheus Souisa, Lilik Hendrajaya & Gunawan Handayani | 166 |
| 6. Study on Transport Properties of Chitosan Membrane in Different Types of Electrolytes<br>Ni Nyoman Rupiasih, Made Sumadiyasa, I Ketut Putra & Ni Made Rasmini                                                                   | 182 |
| 7. Flavonoid Compounds from Krokot Herb ( <i>Lygodium microphyllum</i> ) and their Antioxidant Activity against DPPH<br>Hadi Kuncoro, Kindi Farabi, Laode Rijai, Euis Julaeaha, Unang Supratman & Yoshihito Shiono                 | 192 |
| 8. Molecular Docking of Ferulic Acid Derivatives on P2Y <sub>12</sub> Receptor and their ADMET Prediction<br>Juni Ekowati, Nuzul Wahyuning Diyah, Kholis Amalia Nofianti, Iwan Sahrial Hamid & Siswandono                          | 203 |