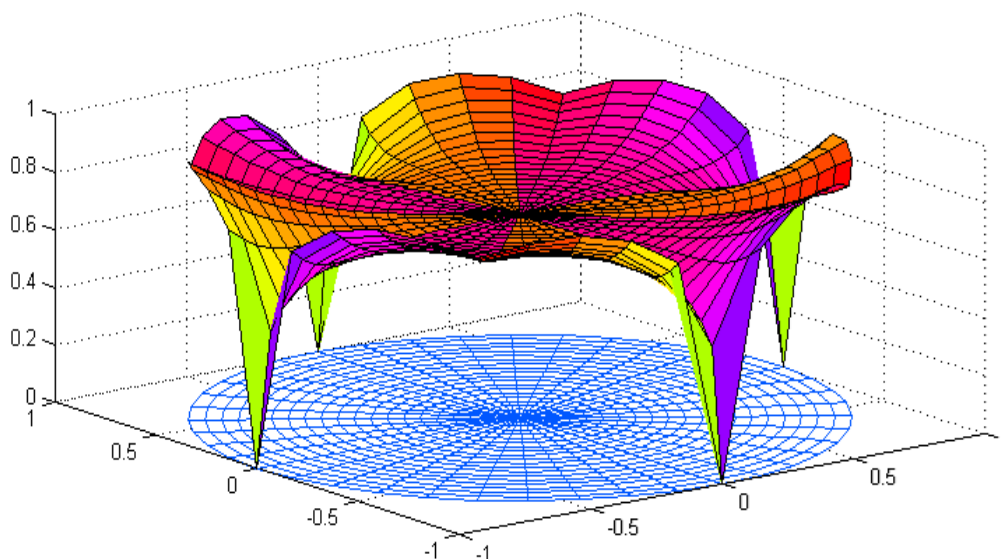


Barekeng

jurnal ilmu matematika dan terapan

p-ISSN 1978-7227 e-ISSN 2615-3017

Barekeng : Journal of Mathematics and Its Applications





jurnal ilmu matematika dan terapan

BAREKENG : Jurnal Ilmu Matematika dan Terapan (BAREKENG : Journal of Mathematics and Its Applications) is a peer-reviewed, scientific journal published by Pattimura University in Collaboration with The Indonesian Mathematical Society (IndoMS). The aims of the journal are to publish and disseminate high quality, original research papers and article review in the following fields: pure mathematics, applied mathematics, statistics, actuarial science, mathematical physics, mathematics education and computer mathematics. This journal is published four times a year, in March, June, September and December. Articles or manuscripts in this journal are the results of personal or group research that have never been published before in other scientific journals or proceedings.

Publisher:

Pattimura University
Indonesia

June 2022,

Copyright © 2022 by the Authors



Jurnal Ilmu matematika dan terapan

p-ISSN 1978-7227 e-ISSN 2615-3017

Volume 16 Issue 2 | June 2022

EDITOR IN CHIEF

Yopi Andry Lesnussa, S.Si., M.Si. (Universitas Pattimura, Indonesia)

ASSOCIATE EDITOR

Berny P. Tomasouw, S.Si., M.Si., (Universitas Pattimura, Indonesia)

Muh. Yahya Matdoan, S.Si, M.Si., (Universitas Pattimura, Indonesia)

Meilin I. Tilukay, S.Si., M.Si., (Universitas Pattimura, Indonesia)

ADVISORY EDITORIAL BOARD

Prof. Dr. Basuki Widodo, M.Sc. (Institut Teknologi Sepuluh Nopember (ITS), Indonesia)

Prof. Dr. Budi Nuraini, MS. (Universitas Padjajaran, Indonesia)

Prof. Dr. Atje Setiawan Abdullah, MS., M.Kom. (Universitas Padjajaran, Indonesia)

Prof. Drs. Marjono, M.Phil., Ph.D. (Universitas Brawijaya, Indonesia)

Prof. Dr. T. G. Ratumanan, M.Pd. (Universitas Pattimura, Indonesia)

Prof. Dr. Theresia Lourens, M.Pd. (Universitas Pattimura, Indonesia)

Subchan, M.Sc., Ph.D. (Institut Teknologi Sepuluh Nopember Surabaya (ITS), Indonesia)

Dr. Ikha Magdalena, M.Si. (Institut Teknologi Bandung (ITB), Indonesia)

Dr. Rr. Kurnia Novita Sari, M.Si (Institut Teknologi Bandung (ITB), Indonesia)

Dr. Sobri Abusini, MT. (Universitas Brawijaya (UB), Indonesia)

Dr. Fajar Adi Kusumo, M.Si. (Universitas Gadjah Mada (UGM), Indonesia)

Dr. Sumardi, M.Si. (Universitas Gadjah Mada (UGM), Indonesia)

Dr. Sutikno, S.Si., M.Si. (Institut Teknologi Sepuluh Nopember (ITS) Indonesia)

Dr. Ir. Bib Paruhum Silalahi, M.Kom. (Institut Pertanian Bogor (IPB), Indonesia)

Prof. Guisheng Zhai (Shibaura Institute of Technology, Japan)

Dr. Yuwadee Klomwises (King Mongkut's Institute of Technology Ladkrabang, Thailand)

Hengameh R. Dehkodi, Ph.D. (Universidade Federal do ABC, Brazil)

Dr. Antonio Comi (Universita degli Studi di Roma "Tor Vergata", Roma)

Prof. Dr. Shakir Ali (Aligarh Muslim University, India)

ASISTANT EDITORIAL

Jefri E. T. Radjabaycolle, S.Si., M.Cs., (Universitas Pattimura, Indonesia)

Venn Y. I. Ilwaru, S.Si., M.Si., (Universitas Pattimura, Indonesia)

Noriska Lewaherilla, ST., M.Si., (Universitas Pattimura, Indonesia)

Dyana Patty, S.Si., M.Sc., (Universitas Pattimura, Indonesia)

PUBLISHER

Pattimura University

in Collaboration with

The Indonesian Mathematical Society (IndoMS)

EDITORIAL ADDRESS

Pattimura University

Jln. Ir. M. Putuhena, Poka, Post Code 97233, Ambon City – Maluku Province, Indonesia

Website : <https://ojs3.unpatti.ac.id/index.php/barekeng/>

Email: barekeng.math@yahoo.com; barekeng.journal@mail.unpatti.ac.id ; Mobile Phone / WA. : +62 85243358669

Facebook (FB): Jurnal Barekeng

Instagram (IG): jurnal_barekeng



List of Articles

Title	Authors	Page
Some Basic Properties of the Noise Reinforced Brownian Motion	Herry Pribawanto Suryawan	363-370
Impact of Fear Behavior on Prey Population Growth Prey-Predator Interaction	Rian Ade Pratama	371-378
The Non-Degeneracy of the Skew-Symmetric Bilinear Form of the Finite Dimensional Real Frobenius Lie Algebra	Edi Kurniadi	379-384
Statistical Control Analysis of the Student's Final Assignment Completion Period at the Mathematics and Natural Sciences Faculty	Arika Febriani, Dewi Sri Susanti, Na'imah Hijriati	385-392
Trace of the Adjacency Matrix $N \times N$ of the Cycle Graph to the Power of two to Five	Fitri Aryani, Dian Ayu Puspita, Corry Corazon Marzuki, Yuslenita Muda	393-408
Regression Model on Pagaralam Coffee Farmers' Income with the Influence of the Use of Herbicide Reductant Variable	Irmeilyana Irmeilyana, Ngudiantoro Ngudiantoro, Sri Indra Maiyanti	409-420
Determination of the Restrained Domination Number on Vertex Amalgamation and Edge Amalgamation of the Path Graph with the Same Order	Landerius Maro, Amelia Sanga, Mia E Tuaty	421-426
On The Behavior Analysis of Susceptible, Infection, Recovery (SIR) Measles Spread Model with Age Structure	Juhari Juhari	427-442
Comparison of Forecasting Violence Cases Number Against Women and Children Using Double Exponential Smoothing (DES) and Auto Regressive Integrated Moving Average (ARIMA) Methods	Siti Nur Fadilah, Putroue Keumala Intan, Wika Dianita Utami	443-450
Long-Short Term Memory (LSTM) for Predicting Velocity and Direction Sea Surface Current on Bali Strait	Diah Devi Pramesti, Dian C Rini Novitasari, Fajar Setiawan, Hani Khaulasari	451-462
Optimal Control on Cholera Disease Spreading Model with Three Variables Control Variation	Irma Fitria, Talitha B Atlanta, Nadia Azahra, Choiriyah Agustina, Subchan Subchan, S Cahyaningtias	463-470
Negative Binomial Regression and Generalized Poisson Regression Models on the Number of Traffic Accidents in Central Java	M Al Haris, Prizka Rismawati Arum	471-482
Inflation Forecasts in Ambon Using Neural Network Applications Backpropagation	Mozart W Talakua, Venn Yan Ishak Ilwaru, Bery P Tomasouw, Syella Z Limba	483-496
On Antiadjacency Matrix of a Digraph with Directed Digon (S)	Muhammad Irfan Arsyad Prayitno, Kiki Ariyanti Sugeng	497-506
Simplified Formulas for Some Bessel Functions and Their Applications in Extended Surface Heat Transfer	Irvan Irvan, Zahedi Zahedi, Anjar Agus, Sarmin Suparni, Harahap Amin	507-514

Development of Android-Based "Mbarengi" Statistics E-Module as an Innovation For Statistics Learning Media with Hybrid Learning	Cindy Cahyaning Astuti, Akbar Wiguna, Fitri Nur Latifa, Amaydhi Olvyya	515-524
Application of System Max-Plus Linear Equations on Serial Manufacturing Machine with Storage Unit	Andika E. Saufika Hakim Maharani, Ari Suparwanto	525-530
Some Modifications of Chebyshev-Halley's Methods Free from Second Derivative with Eighth-Order of Convergence	Yuslenita Muda, Neng Santi, Wartono Wartono, Muhafzan Muhafzan	531-538
Application of Performance Assessment with Method Difficulty Level, Distinguishing Power, Distractor Effectiveness, and Anova (Case Study: Paper Based Test (PBT) Period 2 Questions 2020–2021 Islamic University of Indonesia)	Safira Khoirunnisa, Edi Widodo	539-550
Mathematical Model of Three Species Food Chain with Intraspecific Competition and Harvesting on Predator	Muhammad Manaqib, Suma'inna Suma'inna, Amalia Zahra	551-562
The Optimal Compositions of Daily Menu Food for Breastfeeding Mothers Using the Simplex Method	Adin Lazuardy Firdiansyah	563-568
Developing Design of Automatic Egg Quality Detector Using ROI and RGB Template Methods	Teguh Herlambang, Andy Suryowinoto, Moch Zakaria, Berny Pebo Tomasouw	569-582
Deterministic and Stochastic Dengue Epidemic Model: Exploring the Probability of Extinction	Meksianis Z. Ndi, Yudi Ari Adi, Bertha S Djahi	583-596
Calculation of Central Java Province Region Area Using Shoelace Formula Based on the GADM Database	Adi Setiawan, Eko Sedyono, Tundjung Mahatma	597-606
Restricted Maximum Likelihood Estimation for Multivariate Linear Mixed Model in Analyzing Pisa Data for Indonesian Students	Vera Maya Santi, Khairil Anwar Notodiputro, Indahwati Indahwati, Bagus Sartono	607-614
Predicting Diabetes Mellitus Using Catboost Classifier and Shapley Additive Explanation (SHAP) Approach	Novia Permatasari, Shafiyah Asy Syahidah, Aldo Leofiro Irfiansyah, M. Ghozy Al-Haqqoni	615-624
Dynamics of the Rumor Spreading Model of Indonesia Twitter Case	Arrival Rince Putri, Muthiah As Saidah, Mahdhivan Syafwan	615-624
Forecasting of Currency Circulation in Indonesia Using Hybrid Extreme Learning Machine	Mujiati Dwi Kartikasari	625-634
Mathematics Pre-Service Teachers' Digital Literacy and Their Readiness Towards 21st Century Learning: a Mixed Method Study	Pranata Lulus Soeparno, Christina Ismaniati	635-642
Optimizing The Process of Pick-Up and Delivery with Time Windows Using Ant Colony and Tabu Search Algorithms	Imas Saumi Amalia, Toni Bakhtiar, Jaharuddin Jaharuddin	643-650
Customer Satisfaction Analysis on Sales Engineering Service Using Servqual and Factor Analysis in Packaging Industry	Rheza Vahlepy, Winarno Winarno, Fahriza Nurul Azizah, Dimas Nurwinata Rinaldi	651-662
The Impact of Bank-Specific Factors on Non-Performing Loan in Indonesia: Evidence From ARDL Model Approach	Lexy Janzen Sinay, Sanlly J Latupeirissa, Shelma M Pelu, Meilin I Tilukay	663-674

Robust Clustering of Covid-19 Pandemic Worldwide	Rizki Agung Wibowo, Khoirin Nisa, Hilda Venelia, Warsono Warsono	675-686
The Application of Musical Intelligence-Based Mathematics Learning on Plane Shape Discussion	Ismah Ismah, Bayu Aji Eko Prasetyo	687-694
Analysis of the Factors That Influence Customer Interest in Using Mobile Banking at PT. Bank NTB Syariah Alas Sub-Branch	Agusta Hari Sandy, Koko Hermanto	695-702
Game Theory Application on Online Transportation Company and Driver Income Levels During the Pandemic	Marlina Setia Sinaga, Arnita Arnita, Yulita Molliq Rangkuti, Didi Febrian	703-712
Function Group Selection of Sembung Leaves (<i>Blumea Balsamifera</i>) Significant to Antioxidants Using Overlapping Group Lasso	Kusnaeni kusnaeni, Agus M Soleh, Farit M Afendi, Bagus Sartono	729-742
The Simulation of One-Dimensional Shallow Water Wave Equation with Maccormack Schemes	Iffah Nurlathifah Fikri, Sumardi Sumardi	729-742
Application of Clustering Analysis to Data Distribution of Covid-19 in Bengkulu Province	Nurul Hidayati	743-750
Comparison of Autoregressive Model with Missing Data Treated Using Ordinary Least Squares and Interpolation with Weighting Method	Syifani Akmaliah, Dianne Amor Kusuma, Budi Nurani Ruchjana	751-760

Barekeng : Jurnal Ilmu Matematika dan Terapan

Barekeng : Journal of Mathematics and Its Applications

Nationally Accredited at Rank 2 (SINTA 2) 2021
Ministry of Education Culture, Research, and Technology,
Republic of Indonesia,
based on the Decree No.: 158/E/KPT/2021

Indexed by:



<https://ojs3.unpatti.ac.id/index.php/barekeng/>



barekeng.math@yahoo.com; barekeng.jurmath@gmail.com;
barekeng.journal@mail.unpatti.ac.id

Contact Person:



+62 85243358669 /



+62 8114798669