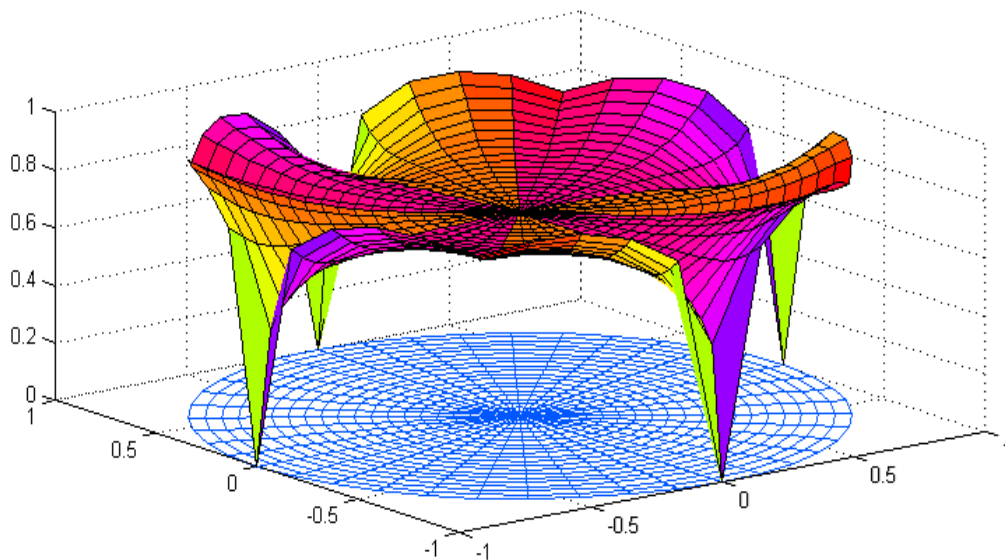


Barekeng

jurnal ilmu matematika dan terapan

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

Barekeng : Journal of Mathematics and Its Applications



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 journal aims to publish and disseminate high-quality, original research papers, and article reviews in the following fields: pure mathematics, applied mathematics, pure statistics, applied statistics, actuarial science, mathematical physics, mathematics education, and computer mathematics. This journal is published four times yearly, 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 in other scientific journals or proceedings.

Publisher:

Pattimura University
Indonesia

December 2023,

Copyright © 2023 by the Authors



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)

Prof. 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)

Prof. 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)

Novita Serly Laamena, S.Pd., M.Si., (Universitas Pattimura, Indonesia)

Novita Dahoklory, S.Si., M.Sc., (Universitas Pattimura, Indonesia)

Citra Fathia Palembang, S.Kom., M.Kom., (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
<i>LOGISTIC REGRESSION APPROACH TO STUDY PREGNANT WOMEN CASES AS A RISK FACTOR OF LBW AT THE BATAKTE PUBLIC HEALTH CENTER, KUPANG BARAT DISTRICT</i>	Keristina Br Ginting, Ganesha Lapenangga Putra	1825-1834
<i>ZERO-INFLATED NEGATIVE BINOMIAL MODELING IN INFANT DEATH CASE DUE TO PNEUMONIA IN EAST JAVA PROVINCE</i>	Cindy Cahyaning Astuti, Agnes Ona Bliti Puka, Akbar Wiguna	1835-1844
<i>DECODING DIGITAL LEARNING: A CART ANALYSIS INSIGHT</i>	Sri Harini, Angga Dwi Mulyanto, Fachrur Rozi	1845-1854
<i>MATHEMATICAL MODELLING OF PRIMARY INFECTION TUBERCULOSIS WITH ASTHMA AS A SECOND INFECTION</i>	Tri Sri Noor Asih, Nurul Fadhilah	1855-1864
<i>CLUSTER ANALYSIS FOR DISTRICT/CITY GROUPING BASED ON VARIABLES AFFECTING POVERTY IN ACEH PROVINCE USING AVERAGE LINKAGE METHOD</i>	Mirda Olivia, Nurviana Nurviana, Fairus Fairus	1865-1872
<i>GLOBAL STABILITY OF DISEASE-FREE EQUILIBRIA IN COVID-19 SPREAD THROUGH LIVING AND INANIMATE OBJECTS MATHEMATICAL MODEL</i>	Ario Wiraya, Yudi Ari Adi, Laila Fitriana, Triyanto Triyanto, Amellia Putri	1873-1884
<i>GENERALIZATION OF VON-NEUMANN REGULAR RINGS TO VON-NEUMANN REGULAR MODULES</i>	Hubbi Muhammad, Sri Wahyuni	1885-1892
<i>PRESIMPLIFIABLE AND WEAKLY PRESIMPLIFIABLE RINGS</i>	Deby Anastasya, Sri Wahyuni	1893-1900
<i>A PRELIMINARY STUDY OF SENTIMENT ANALYSIS ON COVID-19 NEWS: LESSON LEARNED FROM DATA ACQUISITION, PRE-PROCESSING, AND DESCRIPTIVE ANALYTICS</i>	Rahmatin Nur Amalia, Kusman Sadik, Khairil Anwar Notodiputro	1901-1914
<i>IMPROVING ACCURACY OF PREDICTION INTERVALS OF HOUSEHOLD INCOME USING QUANTILE REGRESSION FOREST AND SELECTION OF EXPLANATORY VARIABLES</i>	Asrirawan Asrirawan, Khairil Anwar Notodiputro, Bagus Sartono	1915-1926
<i>SOME FUNDAMENTAL PROPERTIES OF HEAPS</i>	Dwi Mifta Mahanani, Dewi Ismiarti	1927-1932

<i>EDGE IRREGULAR REFLEXIVE LABELING ON MONGOLIAN TENT GRAPH (M_(m,3)) AND DOUBLE QUADRILATERAL SNAKE GRAPH</i>	Diari Indriati, Tsabita Azzahra	1933-1940
<i>EDGE IRREGULAR REFLEXIVE LABELING ON ALTERNATE TRIANGULAR SNAKE AND DOUBLE ALTERNATE QUADRILATERAL SNAKE</i>	Lutfiah Alifia Zalzabila, Diari Indriati, Titin Sri Martini	1941-1948
<i>PRICING OF CALL OPTIONS USING THE QUASI MONTE CARLO METHOD</i>	Indah Oktaviani, Evy Sulistianingsih, Neva Satyahadewi	1949-1956
<i>LOGISTIC REGRESSION MODELING OF REDUCTANT HERBICIDE IN PAGARALAM COFFEE FARMING</i>	Irmeilyana Irmeilyana, Ngudiantoro Ngudiantoro, Sri Indra Maiyanti, Siddiq Makhalli	1957-1968
<i>COMPARISON OF B-SPLINE AND TRUNCATED SPLINE REGRESSION MODELS FOR TEMPERATURE FORECAST</i>	Sri Sulistijowati Handajani, Hasih Pratiwi, Respatiwulan Respatiwulan, Niswatul Qona'ah, Monica Ramadhania, Niken Evitasi, Nindya Eka Apsari	1969-1984
<i>ESTIMATING THE CONCENTRATION OF NO₂ WITH THE COKRIGING METHOD IN THE CAPITAL CITY OF JAKARTA</i>	Toha Saifudin, Atikah Faiza, Laili Puspasari, Zidni 'Ilmatun Nurrohmah	1985-1996
<i>ON THE COMMUTATION MATRIX</i>	Yanita Yanita, Lyra Yulianti	1997-2010
<i>ESTIMATION OF A BI-RESPONSE TRUNCATED SPLINE NONPARAMETRIC REGRESSION MODEL ON LIFE EXPECTANCY AND PREVALENCE OF UNDERWEIGHT CHILDREN IN INDONESIA</i>	Anggi Putri Anisar, Sifriyani Sifriyani, Andrea Tri Rian Dani	2011-2022
<i>MIXED ESTIMATORS OF TRUNCATED SPLINE-EPANECHNIKOV KERNEL ON NONPARAMETRIC REGRESSION AND ITS APPLICATIONS</i>	Sifriyani Sifriyani, Andrea Tri Rian Dani, Meirinda Fauziyah, Zakiyah Mar'ah	2023-2032
<i>AN INTEGRATED APPROACH OF GRA COUPLED WITH PRINCIPAL COMPONENT ANALYSIS FOR FRICTION STIR WELDED AM20 MAGNESIUM ALLOY</i>	Ichwanul Kahfi Prasetya, Kevin Agung Fernanda Rifki, Muhammad Ahsan	2033-2046
<i>FORECASTING THE VALUE OF INDONESIA'S OIL AND GAS IMPORTS USING SEASONAL AUTOREGRESSIVE INTEGRATED MOVING AVERAGE MODEL</i>	Vera Maya Santi, Rahadian Wahyu, Ibnu Hadi	2047-2058
<i>SIMULATION STUDY OF HIERARCHICAL BAYESIAN APPROACH FOR SMALL AREA ESTIMATION WITH MEASUREMENT ERROR</i>	Leli Latifah, Kusman Sadik, Indahwati Indahwati	2059-2070
<i>APPLICATION OF NONPARAMETRIC GEOGRAPHICALLY WEIGHTED REGRESSION METHOD ON OPEN UNEMPLOYMENT RATE DATA IN INDONESIA</i>	Marisa Nanda Saputri, Sifriyani Sifriyani, Wasono Wasono	2071-2080

<i>THE STUDY OF ECCENTRICITY SPECTRUM AND ENERGY IN PATH AND CYCLE GRAPHS</i>	Ni Kadek Emik Sapitri, Vira Hari Krisnawati	2081-2094
<i>CONSTRUCTION OF BICYCLIC GRAPH AND ITS APPLICATION IN TRANS JOGJA ROUTES</i>	Aditya Ambarwati, Vira Hari Krisnawati	2095-2106
<i>PERFORMANCE COMPARISON OF SARIMA INTERVENTION AND PROPHET MODELS FOR FORECASTING THE NUMBER OF AIRLINE PASSENGER AT SOEKARNO-HATTA INTERNATIONAL AIRPORT</i>	Vivin Nur Aziza, Fatma Hilali Moh'd, Firda Aulia Maghfiroh, Khairil Anwar Notodiputro, Yenni Angraini	2107-2120
<i>PANEL DATA REGRESSION MODEL FOR PREDICTING ECONOMIC GROWTH BEFORE AND DURING THE COVID-19 PANDEMIC IN EAST JAVA PROVINCE</i>	Ronny Susetyoko, Edi Satriyanto, Alfi Fadliana, Fitrah Maharani Humaira	2121-2134
<i>COMPARING GAUSSIAN KERNEL AND QUADRATIC SPLINE OF NONPARAMETRIC REGRESSION IN MODELING INFECTIOUS DISEASES</i>	Amanda Adityaningrum, Sri Indriani Ladjali, Ismail Djakaria, Lailany Yahya, Muhammad Rezky Friesta Payu, La Ode Nashar, Herlina Jusuf	2135-2146
<i>ANALYSIS OF THE COVID-19 EPIDEMIC MODEL WITH SELF-ISOLATION AND HOSPITAL ISOLATION</i>	Muhammad Manaqib, Tesa Nur Padilah, Iqbal Maulana	2147-2160
<i>APPLICATION OF EXPECTED CREDIT LOSS MODEL AND MARKOV CHAIN TO CALCULATE NET SINGLE PREMIUM OF UNSECURED CREDIT INSURANCE</i>	Hansen Juni Lieus, Devin Tedja, Vanessa Joewita, Agus Sofian Eka Hidayat, Alexander R. J Silalahi	2161-2170
<i>SAWI TRANSFORMATION FOR SOLVING A SYSTEM OF LINEAR ORDINARY DIFFERENTIAL EQUATIONS</i>	Elvina Halim, La Zakaria	2171-2186
<i>ALGEBRAIC CRYPTANALYSIS ON NTRU-HPS AND NTRU-HRSS</i>	Fadila Paradise, Kiki Ariyanti Sugeng	2187-2196
<i>SENTIMENT ANALYSIS OF OMNIBUS LAW USING SUPPORT VECTOR MACHINE (SVM) WITH LINEAR KERNEL</i>	Ahmad Rohiqim Makhtum, Muhammad Muhajir	2197-2206
<i>A DIFFERENTIABLE STRUCTURE ON A FINITE DIMENSIONAL REAL VECTOR SPACE AS A MANIFOLD</i>	Edi Kurniadi	2207-2212
<i>A FRACTIONAL DIFFERENTIAL EQUATION MODEL FOR THE SPREAD OF POTATO LEAF ROLL VIRUS (PLRV) ON POTATOES</i>	Prisca Jasmine, Arrival Rince Putri, Efendi Efendi	2213-2224
<i>A DYNAMIC HETEROGENEOUS NEXUS BETWEEN PADDY AND POVERTY: EVIDENCE FROM DUMITRESCU-HURLIN CAUSALITY AND PMG-ARDL</i>	Mohamad Egi Destiariono	2225-2234

<i>SENTIMENT ANALYSIS WITH LONG-SHORT TERM MEMORY (LSTM) AND GATED RECURRENT UNIT (GRU) ALGORITHMS</i>	Muhammad Nazhif Abda Putera Khano, Dewi Retno Sari Saputro, Sutanto Sutanto, Antoni Wibowo	2235-2242
<i>APPLICATION OF BAGGING CART IN THE CLASSIFICATION OF ON-TIME GRADUATION OF STUDENTS IN THE STATISTICS STUDY PROGRAM OF TANJUNGPURA UNIVERSITY</i>	Widad Imtiyaz, Neva Satyahadewi, Hendra Perdana	2243-2252
<i>APPLICATION OF FUZZY ANALYTICAL NETWORK PROCESS IN DETERMINING THE CHOICE OF AREAS OF INTEREST</i>	Dinda Tiara, Evy Sulistianingsih, Hendra Perdana, Neva Satyahadewi, Ray Tamtama	2253-2262
<i>INTEGRATION OF SVM AND SMOTE-NC FOR CLASSIFICATION OF HEART FAILURE PATIENTS</i>	Dina Tri Utari	2263-2272
<i>DETERMINING STUDENT GRADUATION BASED ON SCHOOL LOCATION USING GEOGRAPHICALLY WEIGHTED LOGISTIC REGRESSION</i>	Hendra Perdana, Neva Satyahadewi, Fritzgerald Muhammad Arsyi	2273-2280
<i>DEVELOPMENT OF HEALTH INSURANCE CLAIM PREDICTION METHOD BASED ON SUPPORT VECTOR MACHINE AND BAT ALGORITHM</i>	Syaiful Anam, Abdi Negara Guci, Fery Widhiatmoko, Mila Kurniawaty, Komang Agus Arta Wijaya	2281-2292
<i>AN ORDER-P TENSOR MULTIPLICATION WITH CIRCULANT STRUCTURE</i>	Itsar Mangngiri, Qonita Qurrota A'yun, Wasono Wasono	2293-2304
<i>MATHEMATICAL MODELS OF DENGUE TRANSMISSION DYNAMICS WITH VACCINATION AND WOLBACHIA PARAMETERS AND SEASONAL ASPECTS</i>	Aminatus Sa'adah, Dian Kartika Sari	2305-2316
<i>TRIANGLE CONCEPT CONSTRUCTION THROUGH ETHNOMATHEMATICS-BASED ONLINE LEARNING OF KALAMATA FORT ARTIFACTS</i>	Yusril M Pakaya, Marsigit Marsigit	2317-2324
<i>DYNAMIC PANEL DATA GENERALIZED METHOD OF MOMENT ARELLANO-BOND APPROACH IN ECONOMETRIC MODEL RETURN ON ASSETS OF PHARMACEUTICAL COMPANIES</i>	Ni Putu Nanik Hendayanti, Maulida Nurhidayati	2325-2336
<i>THE GRADUATION OF TRANSITION INTENSITIES FROM SEMI-MARKOV PROCESSES TO PREMIUM PRICING</i>	Faihatuz Zuhairoh, Dedi Rosadi, Adhitya Ronnie Effendie	2337-2350
<i>RUIIN PROBABILITY IN THE CLASSICAL RISK PROCESS WITH WEIBULL CLAIMS DISTRIBUTION</i>	Dadang Amir Hamzah, Theresia Stefany Anawa Siahaan, Vania Chrestella Pranata	2351-2358
<i>STRUCTURAL EQUATION MODELING MULTIGROUP INDIRECT EFFECTS ON BANK MORTGAGE PAYMENT TIMELINESS</i>	Ulfah Maisaroh, Adji Achmad Rinaldo Fernandes, Atiek Iriany	2359-2366
<i>ZILLMER RESERVE ON ENDOWMENT LAST SURVIVOR LIFE INSURANCE USING LOMAX DISTRIBUTION</i>	Hasriati Hasriati, Pragista Rimisti, Haposan Sirait, Endang Lily	2367-2380

<i>COMPARATIVE ANALYSIS BETWEEN AHP MOORA AND AHP-ELECTRE METHOD FOR OPTIMAL ELECTRIC AND SOLAR-POWERED SHIPYARD SITE SELECTION</i>	Ade Ratih Ispandari, Nanda Yustina, Zulfa Qonita, Nurul Shabrina, Nanda Itohasi Gutami, Annissa Rochyntawati, Iskendar Iskendar	2381-2396
<i>INTEGRATED OF WEB APPLICATION RSHINY FOR MARKOV CHAIN AND ITS APPLICATION TO THE DAILY CASES OF COVID-19 IN WEST SUMATERA</i>	Putri Monika, Budi Nurani Ruchjana, Kankan Parmikanti, Atje Setiawan Abdullah	2397-2410
<i>CLUSTERING OF FOOD SECURITY IN PAPUA ISLAND: WITH AN OPTIMIZED SPATIAL FUZZY CLUSTERING APPROACH</i>	Rahmat Agung Pasaribu, Erni Tri Astuti	2411-2420
<i>COMPARISON OF PROJECTED UNIT CREDIT AND ENTRY AGE NORMAL METHODS IN PENSION FUND VASICEK AND COX-INGERSOLL-ROSS MODELS</i>	Sulma Sulma, I Nyoman Widana, Syamsuddin Toaha, Ita Fitria	2421-2432
<i>COMPARISON OF H-INFINITY AND ENSEMBLE KALMAN FILTER FOR ESTIMATING MOTION OF MIDDLE FINGER</i>	Teguh Herlambang, Hendro Nurhadi, Fajar Annas Susanto, Berny Pebo Tomasouw	2433-2442
<i>THE EFFECT OF LONG-LASTING INSECTICIDAL NETS ON THE DYNAMICS OF MALARIA SPREAD IN INDONESIA</i>	Euis Aprianti, Jaharuddin Jaharuddin	2443-2450
<i>GREEN DUAL-CHANNEL SUPPLY CHAIN MODEL WITH CONSIDERING PRODUCT RETURNS AND REMANUFACTURING PROCESS</i>	Cynthia Rizky Amelia, Ririn Setiyowati, Sutanto Sutanto	2451-2460
<i>THE BENEFITS OF FAMILY ANNUITY CALCULATION WITH VINE'S COPULA AND FUZZY INTEREST RATE</i>	Kurnia Novita Sari, Randi Deautama, Ady Febrisutisyanto	2461-2470
<i>TRAFFIC CONGESTION ANALYSIS USING SIR EPIDEMIC MODEL</i>	Zani Anjani Rafsanjani, Ratna Herdiana, R Heru Tjahjana, Yogi Ahmad Erlangga	2471-2478

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 Decree No.: 158/E/KPT/2021

Indexed by:



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



Contact Person: +62 852 4335 8669 (Yopi); +62 823 9798 0021 (Dyana)



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