

Prof. Dr. Sutarman, M.Sc

Dosen Program Studi S2 Matematika
Fakultas Matematika Dan Ilmu Pengetahuan Alam
Universitas Sumatera Utara

✉ sutarman@usu.ac.id

🏢 Fakultas Matematika dan Ilmu Pengetahuan Alam

🌐 fmipa.usu.ac.id/id/dosen/sutarman

Prof. Dr. Sutarman, M.Sc. dilahirkan di Belawan, Medan, pada tanggal 26 Oktober 1963 dan merupakan seorang dosen Matematika di Universitas Sumatera Utara. Beliau menyelesaikan pendidikan terakhirnya, yakni S3 Mathematics, di Malaysia pada tahun 2003.

Publications

2025

Jurnal nasional terakreditasi

Hybrid Genetic Algorithm for Dynamic Portfolio Optimization Problems

SUTARMAN , ELVINA HERAWATI

2025

Jurnal internasional bereputasi

Optimization model of vehicle routing problem with heterogenous time windows

MUHAMMAD ROMI SYAHPUTRA , HERMAN MAWENGGANG , SUTARMAN , Gerhard Wilhelm Weber

2023

Jurnal internasional bereputasi

Water distribution network optimization

SUTARMAN

2024

Jurnal internasional bereputasi

Computational analysis of stability of wave propagation against submerged permeable breakwater using hybrid finite element method

MUHAMMAD ROMI SYAHPUTRA , TULUS , SUTARMAN , TULUS JOSEPH HERIANTO

2018

Jurnal internasional

Analysis backpropagation methods with neural network for prediction of children's ability in psychomotoric

SUTARMAN

2018

Jurnal internasional

Hybrid cryptosystem RSA - CRT optimization and VMPC

SUTARMAN

2018

Jurnal internasional bereputasi

Optimization modeling for sustainable production and scheduling of crude palm oil milling industries

SUTARMAN

2023

Jurnal internasional bereputasi

On solving robust optimization using decomposition approach

SUTARMAN

2019

Jurnal internasional bereputasi

Forecasting Plant Growth Using Neural Network Time Series

SUTARMAN

2023

Jurnal internasional bereputasi

Improving the accuracy of k-nearest neighbor (k-NN) using Synthetic Minority Oversampling Technique (SMOTE) and Gain Ratio (GR) for imbalanced class data

SUTARMAN

2021

Jurnal internasional bereputasi

Dataset Weighting Features Using Gain Ratio To Improve Method Accuracy Naive Bayesian Classification

SUTARMAN

2026

Jurnal internasional bereputasi

Adaptive k-Nearest Neighbor Learning for Robust Modal Regression on Multimodal and Heavy-Tailed Data

SUTARMAN , PROF IR NETTI HERAWATI MSC PHD , ADLI ABDILLAH NABABAN

2018

Jurnal internasional bereputasi

Modeling a variant of periodic heterogeneous vehicle routing problem with driver scheduling

SUTARMAN

2023

Jurnal internasional bereputasi

Water Distribution Network Optimization Model with Reliability Considerations in Water Flow (Debit)

SUTARMAN

2023

Jurnal internasional bereputasi

Optimization of the Crude Palm Oil Supply Chain Using a Mixed Integer Linear Programming Model

SAIB SUWILO , SUTARMAN , OPIM SALIM SITOMPUL

2024

Prosiding seminar internasional

Sustainable local seafood production planning with uncertainty in demand

HIRMAN RACHMAN , HERMAN MAWENGGANG , SAIB SUWILO , SUTARMAN

2021

Prosiding seminar internasional

Association Rules Analysis Using Algorithm Apriori And Fuzzy Normalization

OPIM SALIM SITOMPUL , SUTARMAN

2024

Jurnal internasional bereputasi

Poverty Modeling in North Sumatera Province Considering County Location Using Geographical Weighted Regression and LASSO

BENAR SURBAKTI , OPEN DARNIUS , SUTARMAN , TULUS JOSEPH HERIANTO , ISRAIL SITEPU , MUHAMMAD ROMI SYAHPUTRA , ENITA DEWI BR TARIGAN , YULI GREACE C. TURNIP

2024

Jurnal nasional

Pelatihan Pemanfaatan TIK sebagai Media Pembelajaran di SMK Dharma Bhakti dengan Pendekatan Manajerial

SUTARMAN

2023
Jurnal internasional bereputasi

Data envelopment analysis to determine the size of productive scale with real and integer value data

SUTARMAN

2020
Jurnal internasional bereputasi

Analysis of backpropagation neural neural network algorithm on student ability based cognitive aspects

SUTARMAN

2024
Jurnal nasional terakreditasi

Model Klasifikasi dengan Logistic Regression dan Recursive Feature Elimination pada Data Tidak Seimbang

DEDY ARISANDI , SUTARMAN , ERNA BUDHIARTI NABABAN

2019
Jurnal internasional bereputasi

Application of Linear Congruent Generator in Affine Cipher Algorithm to Produce Dynamic Encryption

SUTARMAN

2023
Jurnal nasional terakreditasi

Simplifying Complexity: Linearization Method for Partial Least Squares Regression

SUTARMAN

2018
Jurnal internasional bereputasi

An integer programming model for sustainable multi-product fish production planning problem

SUTARMAN

2024
Jurnal internasional bereputasi

Stochastic Gradient Descents Optimizer and Its Variants: Performance of the Optimizers for Multinomial Logistic Models on Large Data Sets by Simulation

SUTARMAN , OPEN DARNIUS

2023
Prosiding seminar internasional

ANDROID-BASED ONLINE ATTENDANCE APPLICATION PT. HADI UNTUNG PERKASA

SUTARMAN

2023
Jurnal nasional terakreditasi

Forecasting The Share Price of PT Merdeka Copper Gold Tbk By Using Arch-Garch Model

SUTARMAN

2023
Prosiding seminar internasional

Clarke and Wright Savings Algorithm as Solutions Vehicle Routing Problem with Simultaneous Pickup Delivery (VRPSPD)

SUTARMAN

2020
Jurnal internasional bereputasi

Comparative Analysis of Inter-Centroid K-Means Performance using Euclidean Distance, Canberra Distance and Manhattan Distance

SUTARMAN

2023
Jurnal internasional bereputasi

A framework of nonparametric regression to predict natural gas demand

SUTARMAN

2019
Jurnal internasional bereputasi

Chance Constrained Programming for Capacitated Open Vehicle Routing Problems

SUTARMAN

2026
Jurnal nasional

Peningkatan Literasi AI melalui Pengenalan AI Agent bagi Mahasiswa Universitas Batuta

JEFRI JUNIFER PANGARIBUAN , INCE AHMAD ZARQAN , DIMAS YUDISTIRA NUGRAHA , IGNATIUS EDWARD RIANTONO , GANDA TUA SITOMPUL , SCHERLY HANSOPAHELWAKAN , ADLI ABDILLAH NABABAN , IRWANSYAH , FERNANDO SIHOTANG , SUTARMAN

2023
Jurnal nasional terakreditasi

Exploratory Data Analysis (EDA) methods for healthcare classification

HANNA WILLA DHANY , FAHMI IZHARI , SUTARMAN

2021
Jurnal internasional bereputasi

A Cost-Sensitive K-Nearest Neighbors (K-NN) Classification in Handling Multi-class Imbalance Problem

SUTARMAN

2020
Jurnal internasional

A Review: Development of MQL systems applied for metal cutting

SUTARMAN

2020
Jurnal internasional bereputasi

Analysis of the Application of Fuzzy Logic and Levenberg-Marquardt in the Calculation of Used Car Prices

SUTARMAN

2023
Jurnal nasional terakreditasi

Inventory Model for Order Quantity Optimization with Partial Backlogging on Greater Demand at The Beginning

SUTARMAN

2021
Jurnal internasional

Association Rule Analysis using CT-Pro and Hash-based Algorithm in Violence Case of Children

SUTARMAN

2023
Jurnal internasional bereputasi

The Solution of Structure Constrained Problem Using Decomposition Method

SUTARMAN

2024
Prosiding seminar internasional

Sorting of Hazardous and Toxic Solid Waste (B3) Using Ensemble Learning Techniques with VGG-16 and DenseNet-121 Architecture

AMALIA , SUTARMAN , REZA MUSTHOFA MUFTHI

2025
Jurnal internasional bereputasi

A Practical Hybrid Framework for High-Dimensional and Multimodal Data

Analysis: KPCA, Kernel Ridge Regression, and Cross-Validation.

SUTARMAN , ADLI ABDILLAH NABABAN , PANDI BARITA NAULI SIMANGUNSONG

2019

Jurnal internasional bereputasi

Developing Feasible Search Approach for Tackling Large Vehicle Routing Problem with Time Window Considering Service Disruption

SUTARMAN

2021

Jurnal internasional

Dataset Weighting Features Using Gain Ratio To Improve Method Accuracy Naive Bayesian Classification

SUTARMAN

2023

Jurnal nasional terakreditasi

Mathematical Modelling In Logistics Transportation Problems with The Direct Search

SUTARMAN

2023

Jurnal internasional bereputasi

The approaches for the two parameters of the Weibull Distribution

SUTARMAN

2024

Jurnal internasional bereputasi

An inventory model with power demand and partial backlogging under demand dependent on both time and price

SUTARMAN , REANTY TERESA ARITONANG , OPEN DARNIUS

2019

Jurnal internasional bereputasi

A Generalized Reduced Gradient Approach for Solving a Class of Two-Stage Stochastic Nonlinear Programs

SUTARMAN

2023

Prosiding seminar internasional

ANALYZING GAME PLAY DATA FOR ACADEMIC PERFORMANCE IMPROVEMENT: A DECISION FOREST APPROACH

FAHMI IZHARI , SUTARMAN

2022

Jurnal nasional terakreditasi

OPTIMIZATION MODEL IN CLUSTERING THE HAZARD ZONE AFTER AN EARTHQUAKE DISASTER

SUTARMAN

2022

Jurnal internasional bereputasi

Air Quality Prediction Based on Air Pollution Emissions in the City Environment Using XGBoost with SMOTE

SUTARMAN

2023

Jurnal internasional bereputasi

Water Distribution Network Optimization Model with Reliability Considerations in Water Flow (Debit)

MUHAMMAD ROMI SYAHPUTRA , HERMAN MAWENGGANG , SUTARMAN , Gerhard Wilhelm Weber

2024

Jurnal internasional bereputasi

A Non-Linear Optimization Model for the Multi-Depot Multi-Supplier Vehicle Routing Problem with Relaxed Time Windows

2025

Jurnal internasional bereputasi

AI-Driven Metaheuristic Optimization of Facility Layouts for Safety, Sustainability, and Adaptability in Smart Manufacturing

IR. UKURTA TARIGAN, MT , SUKARIA SINULINGGA , SUTARMAN , MEILITA TRYANA SEMBIRING

2023

Prosiding seminar internasional

Optimization for Support Chain Planning of Crude Oil Industry

OPIM SALIM SITOMPUL , LILIS SUKEKSI , SUTARMAN , SAIB SUWILO , HERMAN MAWENGGANG

2020

Prosiding seminar internasional

MLQ Applied for Hard Machining of Ferrous Alloys Using Hardmetals: A Review

SUTARMAN

2023

Jurnal internasional bereputasi

Optimization of the Crude Palm Oil Supply Chain Using a Mixed Integer Linear Programming Model

SUTARMAN

2019

Jurnal internasional bereputasi

Improvement of K-Means Performance Using a Combination of Principal Component Analysis and Rapid Centroid Estimation

SUTARMAN

2023

Jurnal internasional bereputasi

Optimization for support chain planning of crude oil industry

SUTARMAN

2023

Jurnal nasional terakreditasi

A hybrid intelligent model based on logistic regression and fuzzy multiple-attribute decision-making for credit evaluation

SUTARMAN

2023

Jurnal nasional terakreditasi

Optimization Model for Electric Vehicle Routing Problem with Two Charging Options

SUTARMAN

2023

Jurnal internasional bereputasi

Multi-Criteria decision making model for CSR program planning in the direction of a sustainable CPO industry

SUTARMAN

2019

Jurnal internasional bereputasi

Optimization of Production Scheduling and Actual Stock Using Fuzzy Genetic Algorithm

SUTARMAN

2020

Jurnal internasional bereputasi

Generalized Reduced Gradient Approach for Solving Periodic Heterogeneous Vehicle Routing Problem with Side Constraints

SUTARMAN

2019
Jurnal internasional

Development of Multi-Objective Models in Zone-Based Dynamic Layout : Literature Review

SUTARMAN

2022
Jurnal nasional terakreditasi

Application of Fuzzy Time Series Method Cheng Model in Forecasting Stock Prices PT Bukit Asam Tbk

SUTARMAN , PARAPAT GULTOM , ESTHER SORTA MAULI NABABAN , ALYA NADHIRA NUR

2022
Jurnal nasional terakreditasi

ESTIMASI PARAMETER MODEL AUTOREGRESSIVE CONDITIONAL HETEROSCEDASTICITY MENGGUNAKAN METODE BAYES

SUTARMAN

2023
Jurnal nasional terakreditasi

Exploratory Data Analysis (EDA) methods for healthcare classification

SUTARMAN

2018
Jurnal internasional

Spatial hierarchical Bayes estimation of mean years of schooling

SUTARMAN

2022
Jurnal nasional terakreditasi

K-Means Performance Optimization Using Rank Order Centroid (ROC) And Braycurtis Distance

SUTARMAN

2020
Jurnal internasional

Stochastic optimization in disaster relief management

SUTARMAN

2022
Jurnal internasional bereputasi

Improved Benders decomposition approach to complete robust optimization in box-interval

SUTARMAN , SAIB SUWILO

2023
Jurnal nasional terakreditasi

Modelling of Subject Scheduling Systems Using Hybrid Artificial Bee Colony Algorithm

SUTARMAN

2023
Prosiding seminar internasional

ANDROID-BASED ONLINE ATTENDANCE APPLICATION PT. HADI UNTUNG PERKASA

HANNA WILLA DHANY , SUTARMAN

2020
Jurnal internasional bereputasi

Genetic Algorithm in Image Inserting with Modified Least Significant Bit Method to Find the Best MSE Value

SUTARMAN

2026
Prosiding seminar internasional

Development of Mamdani Fuzzy Rule-Based System Using the Gray Wolf

Optimizer (GWO) Algorithm for Maritime Safety Prediction

ADE CANDRA , SUTARMAN , WAHYU HILDAN SYAH

2024

Prosiding seminar internasional

Determining The Parameter K of K-Nearest Neighbors (KNN) using Random Grid Search

ADE CANDRA , SUTARMAN , FACHRI AULIANSYAH SIREGAR

2020

Jurnal internasional bereputasi

Generalized Reduced Gradient Approach for Solving Sustainable Production and Scheduling Planning of Crude Palm Oil Milling Industries

SUTARMAN

2023

Jurnal internasional

Dynamic Analysis of Rumor Spreading Models in Social Networks with Time Delay

TULUS , SUTARMAN , ELVINA HERAWATI

2019

Jurnal internasional bereputasi

Mixed Integer Program for Tackling Process Control Demand in the Capacitated Open Vehicle Routing Problems

SUTARMAN

2018

Jurnal internasional

Estimating parameter of Rayleigh distribution by using Maximum Likelihood method and Bayes method

SUTARMAN

2024

Jurnal nasional

Pengembangan Web Company Profile Sebagai Upaya Pengabdian Kepada Masyarakat Di PT. Hamim Technology Indonesia

SUTARMAN

2025

Prosiding seminar internasional

Feature Selection Using Ensemble Lasso Regression, Random Forest and Recursive Feature Elimination Methods in Breast Cancer Classification

AMALIA , SUTARMAN

2013

Jurnal internasional

Retinal thickness changes after phacoemulsification

SUTARMAN

2019

Jurnal internasional bereputasi

The relationship of consumer preference, value creation, and global supply chain in the third wave coffee business in Sumatera Utara, Indonesia

SUTARMAN

2025

Jurnal nasional

Sosialisasi Bahaya Phishing dan Tips Aman Menggunakan Internet bagi Mahasiswa

SUTARMAN

2022

Jurnal internasional

Optimization of Material Requirement Planning Using A Linear Program

SUTARMAN

2019

Jurnal internasional bereputasi

An Optimal Decision Model to Determine the Location of Hubs in a Network of Communication

SUTARMAN

2017

Jurnal internasional bereputasi

Optimization of enzymatic process in biodiesel production for green process development

SUTARMAN

2018

Jurnal internasional bereputasi

Combining the use of analytical hierarchy process and lexicographic goal programming in selecting project executor

SUTARMAN

2025

Jurnal internasional bereputasi

RESILIENCE MODEL DEVELOPMENT FOR MULTI-DEPOT VEHICLE ROUTING PROBLEMS WITH PROBABILITY CONSTRAINTS UNDER DISTURBANCE CONDITIONS

MUHAMMAD ROMI SYAHPUTRA , HERMAN MAWENGGANG , INTAN SYAHRINI , SUTARMAN

2017

Jurnal internasional

Encryption and Decryption using Password Based Encryption, MD5, and DES

SUTARMAN

2024

Jurnal internasional bereputasi

IMBALANCED MEDICAL DATA ANALYSIS: DEVELOPING A MULTICLASS LOGISTIC REGRESSION CLASSIFICATION MODEL WITH PCA APPROACH

SUTARMAN , ERNA BUDHIARTI NABABAN , ADLI ABDILLAH NABABAN , Muhammad Zarlis

2025

Jurnal internasional bereputasi

Optimization model of vehicle routing problem with heterogenous time windows

SUTARMAN , HERMAN MAWENGGANG , MUHAMMAD ROMI SYAHPUTRA

2018

Jurnal internasional

Volatility in GARCH Models of Business Tendency Index

SUTARMAN

2024

Jurnal nasional terakreditasi

PERFORMANCE OF ROBUST SUPPORT VECTOR MACHINE CLASSIFICATION MODEL ON BALANCED, IMBALANCED AND OUTLIERS DATASETS

SUTARMAN , MUHAMMAD ARDIANSYAH SEMBIRING , HERMAN SAPUTRA , RIKI ANDRI YUSDA , ERNA BUDHIARTI NABABAN

2026

Jurnal internasional bereputasi

FIFO Age-Cohort Stochastic MILP for Perishable Inventory Optimization

HIRMAN RACHMAN , SAIB SUWILO , SUTARMAN , ELVINA HERAWATI

2019

Jurnal internasional bereputasi

Development of Multi-Objective Models in Zone-Based Dynamic Layout: Literature Review

SUTARMAN

2019

Jurnal internasional bereputasi

Modification K-Means Model with Local Deviation Method to Improve the Accuracy in Forming Clusters

SUTARMAN

2019

Jurnal internasional bereputasi

Analysis of Priorities Queuing Model (N-P) System with Multiple Channel Multiple Phase and Simple Additive Weighting

SUTARMAN

2019

Jurnal internasional

The Combination of Ant Colony Optimization (ACO) and Tabu Search (TS) Algorithm to Solve the Traveling Salesman Problem (TSP)

SUTARMAN

2022

Jurnal nasional terakreditasi

Using the Deep Constrained Clustering Approach to Create a Business Profile

SUTARMAN

2023

Jurnal nasional terakreditasi

Performance Comparison Analysis of Multi Prime RSA and Multi Power RSA

SUTARMAN

2020

Jurnal internasional

System Design and Development of MQL Unit for Hard Machining Application: A Review

SUTARMAN

2025

Jurnal internasional bereputasi

DEVELOPMENT OF A VARIANCE-BASED DETERMINISTIC ALGORITHM FOR STOCHASTIC MST IN DISTRIBUTION NETWORKS

SUTARMAN , MARDININGSIH , SAIB SUWILO

2021

Jurnal internasional bereputasi

Analysis of Combination Algorithm Data Encryption Standard (DES) and Blum-Blum-Shub (BBS)

SUTARMAN

2018

Jurnal internasional bereputasi

Optimum Index Factor and Cloud Removal on the Landsat Imagery Data Processing

SUTARMAN

2020

Jurnal internasional

A model to determine optimally hub location for a communication network

SUTARMAN

2020

Jurnal internasional bereputasi

Sample median approximation on stochastic data envelopment analysis

SUTARMAN

2019

Jurnal internasional

Controlling industrial processes using multivariate exponential weighted moving average (Mewma)

SUTARMAN

2023

Jurnal internasional bereputasi

Computational Assessment of Wave Stability Against Submerged Permeable Breakwaters: A Hybrid Finite Element Method Approach

SUTARMAN , TULUS , Jonathan Liviera Marpaung , Md Mustafizur Rahman , MUHAMMAD ROMI SYAHPUTRA , TULUS JOSEPH HERIANTO

2023

Jurnal nasional terakreditasi

Optimasi Pembelajaran PHP dan MySQL untuk Penguatan Kompetensi Jurusan TKJ SMK YAPIM Biru-biru

SUTARMAN

Researches

2023

Dynamic Analysis of Rumor Spreading Models in Social Networks with Time Delay

ELVINA HERAWATI , SUTARMAN , TULUS

2022

Pemberdayaan Masyarakat Dan Perilaku pengunjung Mendukung Ekowisata di Aek Milas Hutaraja, Kabupaten Mandailing Natal

MUHAMMAD YAMIN , SUTARMAN

2026

Penelitian Kerjasama Antar Perguruan Tinggi

INTEGRASI RULE-BASED AI DAN AUGMENTED REALITY PADA SMART ADAPTIVE LEARNING UNTUK AKSELERASI COMPUTATIONAL THINKING SISWA ASD

MUTIARA FELICITA AMSAL , SUTARMAN , MUNIR

Community Services

2023

Ipteks Bagi Masyarakat

Optimasi Pembelajaran PHP dan MySQL untuk Penguatan Kompetensi Jurusan TKJ SMK YAPIM Biru-Biru

FRICLES ARIWISANTO SIANTURI , SUTARMAN , ARJON SAMUEL SITIO

2020

PEMBELAJARAN AKTIF UNTUK TINGKAT SEKOLAH DASAR MENGGUNAKAN APLIKASI GEOGEBRA DI SD SWASTA ISLAM TERPADU IQRATM

ELVINA HERAWATI , ELLY ROSMAINI , SUTARMAN

2023

Ipteks Bagi Masyarakat

Optimizing Digital Learning Based Learning as a Learning Media of Today with Enhanced Microsoft Office Softskill at SMAS Husni Thamrin

ELVINA HERAWATI , SUTARMAN

2012

Ipteks Bagi Masyarakat

Pelatihan Pembuatan Sabun Colek, Sabun Cair Dan Cairan Pembersihan Lantai Dalam Skala Kecil Dan Menengah Di Pangkalan Susu Kabupaten Langkat

CUT FATIMAH ZUHRA , YUGIA MUIS , SAHARMAN GEA , SUTARMAN , AMIR HAMZAH SIREGAR , DARWIN YUNUS NASUTION , NURSAL , MARPONGAHTUN

2011

Pelatihan Pembuatan Cairan Pembersih Lantai Untuk Skala Kecil (Rumah Tangga) Dan Menengah Di Desa Stabat Lama Kecamatan Sei Wampu Kabupaten Langkat

YUGIA MUIS , SAHARMAN GEA , SUTARMAN , DARWIN YUNUS NASUTION , MARPONGAHTUN

2020

Ipteks Bagi Masyarakat

Penyuluhan Tentang Pemberdayaan Masyarakat Dalam Pencegahan Covid-19 Kepada Masyarakat Desa Laut Dendang Kecamatan Percut Sei Tuan Kabupaten Deli Serdang

HERMAN MAWENGGANG , MARDININGSIH , SUTARMAN , SAIB SUWILO , MARPONGAHTUN

2022

Pemberdayaan Masyarakat dan Perilaku Pengunjung Mendukung Ekowisata di Aek Milas Hutaraja, Kabupaten Mandailing Natal

MUHAMMAD YAMIN , SUTARMAN
