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Data-Driven Decision Support System
Data Science Technology
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Qualifications

PhD, Stability of traveling waves to a chemotaxis model with nonlinear diffusion
1 Sept 2017 → 1 Jan 2022
Award Date: 1 Jan 2022

Research outputs

Understanding the Spatial Distribution of Stunting in East Java, Indonesia: A Comparison of GWR and MS-GWR Models
Rantini, D., Najiyya, S. I., Ghani, M., Yasmirullah, S. D. P., Fahmiyah, I., Ramadan, A., Othman, F. & Alya, N. A., 21 Dec 2026, In: *Statistics, Optimization and Information Computing*. 15, 1, p. 311-323 13 p.

Modeling risk-based capital for life insurance companies in Indonesia: a comparative study of panel data regression and Gaussian Process Boosting
Ananda, A. & Ghani, M., Oct 2026, In: *Quality and Quantity*. 60, 5, p. 19025-19064 40 p.

Traveling Waves of Chemotaxis Model on Food Metric
Ghani, M., Apr 2026, In: *Taiwanese Journal of Mathematics*. 30, 2, p. 379-405 27 p.

Diphtheria transmission prediction by extended Kalman filter
Ghani, M., Jun 2025, In: *MethodsX*. 14, 103281.

Implementation of GWR and MGWR in Modelling Gross Regional Domestic Product (GRDP) in East Java
Ramadan, A., Afifah, M., Rantini, D., Fahmiyah, I., Ningrum, R. A., Ghani, M., Yasmirullah, S. D. P., Alya, N. A., Yandra, M. M., Yulianingrum, V. & Othman, F., 1 Jan 2025, In: *Data and Metadata*. 4, 1065.

Optimization of PID Control System in a PCT-14-Based Pressure Control System Using Genetic Algorithm
Ningsih, W., Suryandari, A. S., Ghani, M., Suharti, P. H., Pratiwi, M. K. & Mustikarini, A. W., 2025, *5th IEEE International Conference on Innovations in Power and Advanced Computing Technologies, i-PACT 2025*. Institute of Electrical and Electronics Engineers Inc., (5th IEEE International Conference on Innovations in Power and Advanced Computing Technologies, i-PACT 2025).

Ocean wave prediction using Long Short-Term Memory (LSTM) and Extreme Gradient Boosting (XGBoost) in Tuban Regency for fisherman safety
Dhiya'ulhaq, R. A., Safira, A., Fahmiyah, I. & Ghani, M., Dec 2024, In: *MethodsX*. 13, 103031.

Performance analysis of IMC-PID controller on PCT-14 air pressure control system
Ningsih, W., Suharti, P. H. & Ghani, M., Dec 2024, In: *MethodsX*. 13, 102966.

Spatial impact on inflation of Java Island prediction using Autoregressive Integrated Moving Average (ARIMA) and Generalized Space-Time ARIMA (GSTARIMA)
Safira, A., Dhiya'ulhaq, R. A., Fahmiyah, I. & Ghani, M., Dec 2024, In: *MethodsX*. 13, 102867.

Kalman filter based on a fractional discrete-time stochastic augmented CoVid-19 model
Ghani, M., Rantini, D. & Maryamah, Jun 2024, In: *Journal of Biosafety and Biosecurity*. 6, 2, p. 76-98 23 p.

Dynamics of spatio-temporal HIV–AIDS model with the treatments of HAART and immunotherapy

Ghani, M., May 2024, In: International Journal of Dynamics and Control. 12, 5, p. 1366-1391 26 p.

Analysis distribution of oxygen and carbon dioxide concentration as air quality indicators in Gili Iyang Island, Madura, Indonesia

Megantoro, P., Kusuma, H. F. A., Perkasa, S. D., Syahbani, M. A., Salmahuda, M. K., Rachmadhani, B. F., Apsari, R., Nugraha, Y. U., Ghani, M. & Prastio, R. P., 29 Jan 2024, *AIP Conference Proceedings*. Amrillah, T., Prihandana, G. S., Prastio, R. P., Megantoro, P. & Fahmiah, I. (eds.). 1 ed. American Institute of Physics Inc., 030005. (AIP Conference Proceedings; vol. 3047, no. 1).

Analysis of wind and solar energy potential of coastal island in East Madura (Case study: Gili Iyang island)

Megantoro, P., Syahbani, M. A., Perkasa, S. D., Kusuma, H. F. A., Salmahuda, M. K., Rachmadhani, B. F., Apsari, R., Nugraha, Y. U., Ghani, M. & Prastio, R. P., 29 Jan 2024, *AIP Conference Proceedings*. Amrillah, T., Prihandana, G. S., Prastio, R. P., Megantoro, P. & Fahmiah, I. (eds.). 1 ed. American Institute of Physics Inc., 030006. (AIP Conference Proceedings; vol. 3047, no. 1).

Analysis of traveling waves for nonlinear degenerate viscosity of chemotaxis model under general perturbations

Ghani, M., 2024, In: AIMS Mathematics. 9, 1, p. 1373-1402 30 p.

Chatbots in Academia: A Retrieval-Augmented Generation Approach for Improved Efficient Information Access

Maryamah, M., Irfani, M. M., Tri Raharjo, E. B., Rahmi, N. A., Ghani, M. & Raharjana, I. K., 2024, *KST 2024 - 16th International Conference on Knowledge and Smart Technology*. Institute of Electrical and Electronics Engineers Inc., p. 259-264 6 p. (KST 2024 - 16th International Conference on Knowledge and Smart Technology).

Exploring Micromagnetorotation in Maxwell Viscous Fluid Flow Within a Porous Cylinder

Norasia, Y. & Ghani, M., Dec 2023, In: Mathematical Modelling of Engineering Problems. 10, 6, p. 2095-2101 7 p.

Analysis of degenerate Burgers' equations involving small perturbation and large wave amplitude

Ghani, M., 15 Sept 2023, In: Mathematical Methods in the Applied Sciences. 46, 13, p. 13781-13796 16 p.

Dynamical analysis of spatio-temporal CoVid-19 model

Ghani, M., Fahmiah, I., Ningrum, R. A. & Wardana, A. A., Aug 2023, In: International Journal of Dynamics and Control. 12, 8, p. 2803-2829 27 p.

Persistence, Extinction, and boundedness in pth moment of hybrid stochastic logistic systems by delay feedback control based on discrete-time observation

Mukama, D. S., Ghani, M. & Mbalawata, I. S., Aug 2023, In: Mathematics and Computers in Simulation. 210, p. 661-677 17 p.

A fractional SEIQR model on diphtheria disease

Ghani, M., Utami, I. Q., Triyayuda, F. W. & Afifah, M., Jun 2023, In: Modeling Earth Systems and Environment. 9, 2, p. 2199-2219 21 p.

Analysis of traveling fronts for chemotaxis model with the nonlinear degenerate viscosity

Ghani, M., 2023, In: AIMS Mathematics. 8, 12, p. 29872-29891 20 p.

Dynamics of CoVid-19 Disease in Semarang, Indonesia: Stability, Optimal Control, and Model-Fitting

Ghani, M., Norasia, Y. & Ningsih, W., 2023, (Accepted/In press) In: Differential Equations and Dynamical Systems. 34, 1, p. 31-67 37 p.

Fluid Dynamics of Free Convection Flow in Unsteady State over Single Inclined Flat Plate

Ghani, M., Utomo, T., Norasia, Y. & Mukama, D. S., 2023, In: IAENG International Journal of Computer Science. 50, 2, IJCS_50_2_31.

Traveling fronts of viscous Burgers' equations with the nonlinear degenerate viscosity

Ghani, M. & Nurwidiyanto, 2023, (Accepted/In press) In: Mathematical Sciences. 18, 4, p. 625-635 11 p.

Existence of the unsteady heat conduction in Sobolev space and numerical technique with twenty-one global nodes

Tafrikan, M., Norasia, Y. & Ghani, M., 13 Jul 2022, *Proceedings of the 6th National Conference on Mathematics and Mathematics Education, SENATIK 2021*. Sutrisno, Muhtarom, Wulandari, D., Happy, N., Shodiqin, A., Murtianto, Y. H. & Kartinah (eds.). American Institute of Physics Inc., 020067. (AIP Conference Proceedings; vol. 2577).

Asymptotic Stability of Singular Traveling Waves to Degenerate Advection-Diffusion Equations Under Small Perturbation

Ghani, M., 2022, In: Differential Equations and Dynamical Systems.

Local well-posedness of Boussinesq equations for MHD convection with fractional thermal diffusion in sobolev space $H^s(\mathbb{R}^n) \times H^{s+1}(\mathbb{R}^n) \times H^{s+\alpha}(\mathbb{R}^n)$

Ghani, M., Dec 2021, In: Nonlinear Analysis: Real World Applications. 62, 103355.

Existence and uniqueness of the boussinesq equations for MHD convection

Tafrikan, M. & Ghani, M., 23 Mar 2021, In: Journal of Physics: Conference Series. 1836, 1, 012034.

Asymptotic stability of traveling fronts to a chemotaxis model with nonlinear diffusion

Ghani, M., Li, J. & Zhang, K., 2021, In: Discrete and Continuous Dynamical Systems - Series B.

Projects

ANALISIS DAMPAK EL NINO DAN LA NINA DI JAWA TIMUR SEBAGAI EARLY WARNING SYSTEM

Fahmiyah, I. (PI) & Ghani, M. (CoPI)

1/01/21 → ...

Analisis Sistem Dinamik pada Two-wheeled Stair-climbing Robot Menggunakan Kalman Filter

Wardana, A. A. (PI), Ghani, M. (CoPI) & Setiawan, M. A. (CoPI)

1/01/24 → ...

Aplikasi Sistem Dinamik pada Pendekatan Dua Terapi untuk Pengobatan HIV/AIDS dan Penyebaran Rumor pada Jaringan Sosial Daring

Ghani, M. (PI)

1/01/24 → ...

Buku Monograf Quasi-Ideal Minimal dalam Γ - Semigrup dan Γ - Semigrup Terurut

Ghani, M. (PI)

1/01/24 → ...

KASIR PINTAR UNTUK MEMBANTU KEGIATAN UMKM DI DESA SIDOGIRI, PASURUAN

Ghani, M. (PI), Fakhruzzaman, M. N. (CoPI) & Maryamah (CoPI)

1/11/24 → ...

LOCAL STABILITY OF FRACTIONAL DERIVATIVE DYNAMICS SYSTEM FOR DIPHTHERIA EPIDEMIC MODEL WITH NATURAL IMMUNITY RATE ON EXPOSED INDIVIDUALS

Ghani, M. (PI) & Utami, I. Q. (CoPI)

1/01/21 → ...

PELATIHAN ANALISIS DATA DAN PEMBUATAN DASHBOARD KEPENDUDUKAN BAGI KADER DESA SENTUL, TEMBELANG, JOMBANG UNTUK MEMPERMUDAH PENDATAAN PENDUDUK

Ningrum, R. A. (PI), Rantini, D. (CoPI) & Ghani, M. (CoPI)

1/12/22 → ...

PELATIHAN PENGELOLAAN DATA SISWA SMPN 52 DAN SMPN 19 SURABAYA BERBASIS WEBSITE SEBAGAI UPAYA EFISIENSI PROSES MANAJEMEN

Ghani, M. (PI), Maryamah (CoPI) & Fakhruzzaman, M. N. (CoPI)

1/12/23 → ...

Pengantar Bahasa Pemrograman dan Aplikasinya dengan Pascal

Ghani, M. (PI)

1/01/22 → ...

PENGEMBANGAN ROBOT AGV UNTUK EFISIENSI LOGISTIK MATERIAL PRODUKSI DI PT. YAMAHA MUSICAL PRODUCTS INDONESIA

Indrawan, R. W. (PI), Prastio, R. P. (CoPI), Setiawan, M. A. (CoPI), Wardana, A. A. (PI), Sofiah, A. (CoPI), Prihandana, G. S. (CoPI), Mukhlisin, A. (CoPI) & Ghani, M. (CoPI)

1/01/24 → ...

SISTEM TANYA JAWAB OTOMATIS PERMASALAHAN FTMM BERBASIS ARTIFICIAL INTELLIGENT

Maryamah (PI), Ghani, M. (CoPI) & Raharjana, I. K. (CoPI)

1/01/23 → ...

Courses

MAA208 - Metode Matematika

Wulandari, C. P., Ghani, M., Fahmiyah, I. & Ningrum, R. A.

1/01/22 → 30/06/22

MAA210 - Matriks dan Peubah Kompleks

Wulandari, C. P. & Ghani, M.

1/07/22 → 31/12/22

MAS212 - Riset Operasi

Wulandari, C. P. & Ghani, M.

1/07/22 → 31/12/22

MAS223 - Proses Stokastik

Mardianto, M. F. F., Ana, E., Wulandari, C. P., Ghani, M., Ningrum, R. A. & Fahmiyah, I.

1/07/22 → 31/12/22

SID205 - Eksplorasi dan Visualisasi Data

Kartono, K., Pusporani, E., Ghani, M., Fahmiyah, I., Fakhruzzaman, M. N. & Ningrum, R. A.

1/07/22 → 31/12/22

TIA302 - Penelitian Operasi Lanjut

Wulandari, C. P. & Ghani, M.

1/07/22 → 31/12/22

TID104 - Matriks dan Ruang Vektor

Wulandari, C. P. & Ghani, M.

1/07/22 → 31/12/22

TID201 - Penelitian Operasi Dasar

Wulandari, C. P. & Ghani, M.

1/01/22 → 30/06/22

Employment

Faculty of Advanced Technology and Multidiscipline

Airlangga University

1 Sept 2021 → present

Data-Driven Decision Support System

Airlangga University

1 Jan 2025 → present

Data Science Technology

Airlangga University

1 Sept 2021 → present