

DR. NUR FADHILAH BINTI IBRAHIM

SENIOR LECTURER

Dr. Nur Fadhilah Ibrahim is a dedicated lecturer specializing in optimization and linear programming. She is not only focused on these specialized areas but also keen to venture into new research fields to expand her knowledge.

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SELECTED RESEARCH PROJECTS

FRGS from Ministry of Higher Education Malaysia. Hybrid artificial neural networks-genetics algorithm in the solutions of the partial differential equation thermal for early stage breast tumor detection (2022-2025). RM81520.

TResearch Acculturation Grant Scheme (RAGS) from Ministry of Higher Education Malaysia. Effect of Polynomial Shift in the Method for Finding the Spectral Radius of a Generalised Nonnegative Polynomial.(2015-2018) RM32000

SELECTED PUBLICATIONS

Kurniati, A.B, Bakar, M.A, **Ibrahim, N.F.**, Harun, H.F. Enhancing artificial neural network learning efficiency through Singular value decomposition for solving partial differential equations. Results in Applied Mathematics, 2025, 25, 100522. Scopus-indexed

Alsuliman, S.N, **Ibrahim, N.F.**, Aizam, N.A.H. A New Conjugate Gradient Parameter via Modification of Liu-Storey Formula for Optimization Problem and Image Restoration. Journal of Advanced Research in Applied Sciences and Engineering Technology, 2024, 35(2), pp. 175-186. Scopus-indexed

Alsuliman, S.N, **Ibrahim, N.F.**, Aizam, N.A.H. A Modified Wei-Yao-Liu Conjugate Gradient Method for Unconstrained Optimization and Motion Control of Robotic Motion Manipulators. Journal of Advanced Research in Applied Sciences and Engineering Technology, 2024, 34(1), pp. 314-327. Scopus-indexed

Pratama, D.A, Abo-Alsabeh, R.R, Bakar, M.A, Salhi, A, **Ibrahim, N.F.** Solving partial differential equations with hybridized physic-informed neural network and optimization approach: Incorporating genetic algorithms and L-BFGS for improved accuracy. Alexandria Engineering Journal, 2023, 77, pp. 205-226. Scopus-indexed

Pratama, D.A, Bakar, M.A, **Ibrahim, N.F.**, Idris, R, Mohamed, N. Physical restriction neural networks with restarting strategy for solving mathematical model of thermal heat equation for early diagnose breast cancer. Results in Applied Mathematics, 2023, 19, 100384. Scopus-indexed



RESEARCHER PROFILE

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EDUCATION

- PhD in Mathematics & Statistics, Curtin University
- Master in Mathematics, Universiti Teknologi Malaysia
- BSc. in Industrial Mathematics, Universiti Teknologi Malaysia

AREAS OF EXPERTISE

- Optimization
- Linear programming
- Operations Research

SUPERVISION



COLLABORATORS