



Setyo Tri Windras Mara

Early-Stage Researcher in Operational Research

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RESEARCH INTERESTS

Mathematical Optimization, Heuristics, Supply-Chain Management, Logistics

SOFTWARE SKILLS

- Programming Language : MATLAB, Python, C++
- Mathematical Optimization : Gurobi, LINGO

LANGUAGE

- Indonesian (Native)
- English (Fluent)
TOEFL IBT Score : 104/120 (R 29, L 26, S 22, W 27), December 14th, 2019

EDUCATION

2017 - 2019 Universitas Gadjah Mada

Industrial Engineering - Master of Science (M.Sc)

GPA : 4.00 out of 4.00 (*cum-laude honour*)

Thesis : Solving a Multi-objective Sustainable Location-Routing Problem using Discrete Multi-objective Sine-Cosine Algorithm (Case Study in Daerah Istimewa Yogyakarta, Indonesia)

2018 - 2019 National Taiwan University of Science and Technology (Taiwan Tech)

Industrial Management - Master of Business Administration (MBA)

GPA : 4.23 out of 4.30

2011 - 2016 Universitas Gadjah Mada

Industrial Engineering Program - Bachelor of Engineering

GPA : 3.25 out of 4.00

PROFESSIONAL EXPERIENCES

- 2020 – Now **Members of Supply Chain and Logistics Laboratory DTMI-UGM**
- Supervising the laboratory work course of the Mechanical and Industrial Engineering Department of Universitas Gadjah Mada
 - Conducting research on the intersection between supply chain management and operations research
- 2020 – Now **Junior Lecturer at Universitas Gadjah Mada**
- Performing research and teaching courses for the Mechanical and Industrial Engineering Department of Universitas Gadjah Mada
- 2018 – 2019 **Research Assistant at Decision Science Laboratory IM-NTUST**
- Conducting a research on meta-heuristic with Prof. Dr. Ren-Jieh Kuo
 - Helping to review other students' paper drafts

NOTABLE ACHIEVEMENTS

- 2019 **Best Master Degree Student for Faculty of Engineering**
Graduation Ceremony of Universitas Gadjah Mada, Period I, 2019/2020
- 2019 **Best Paper Award**
2019 International Conference in Management Science and Decision Making
Tamkang University, Taiwan
- 2018 **Scholarship Awardee**
UGM-NTUST Dual Degree Program Scholarship
- 2015 **Finalist Team**
International Project Management Challenge 2017
Yogyakarta, Indonesia

GRANTS

- Apr 2020 **Grant for Young Lecturer**
ID: 2376/UN1/DITLIT/DIT-LIT/PT/2020
Funding organization: Universitas Gadjah Mada
Title: *A Heuristic Development for Last-Mile Delivery Logistics with Drone*
IDR. 23.592.000 (April 2020 – November 2020)

PUBLICATION(S)

- (1) Mara, S.T.W., Asih, A.M.S. and Kuo, R.J., 2019, **Solving a Multi-objective Location-Routing Problem with Minimum Cost and Total Time Balance**, *International Journal of Information and Management Sciences* 30(3), pp. 249-269.
- (2) Rifai, A.P., Mara, S.T.W., Kusumastuti, P.A. and Wiraningrum, R.G., **A Genetic Algorithm for the Double Row Layout Problem** (*forthcoming in Jurnal Teknik Industri*)

IN PROGRESS (UNPUBLISHED WORKING PAPERS)

- (1) Mara, S.T.W., Kuo, R.J. and Asih, A.M.S., **Location-Routing Problem: A Survey and Classification of Recent Research** (*under 2nd stage review in International Transactions in Operational Research*)
- (2) Rifai, A.P., Mara, S.T.W. and Sudiarso, A., **Multi-objective Distributed Reentrant Permutation Flow Shop Scheduling with Sequence-dependent Setup Time** (*under 2nd stage review in Expert Systems with Applications*)
- (3) Rifai, A.P., Kusumastuti, P.A., Mara, S.T.W., Norcahyo, R. and Dawal, S.Z.M., **Multi-Operator Hybrid Genetic Algorithm-Simulated Annealing for Reentrant Permutation Flow-Shop Scheduling** (*under 2nd stage review in Asean Engineering Journal*)
- (4) Mara, S.T.W., Rifai, A.P. and Sopha, B.M., **An Adaptive Large Neighborhood Search Heuristic for the Flying Sidekick Traveling Salesman Problem** (*Submitted on May 2020*)
- (5) Mara, S.T.W., Sutoyo, E. and Rifai, A.P., **The Job Sequencing and Tool Switching Problem with Sequence-Dependent Setup Time** (*Submitted on September 2020*)
- (6) Rifai, A.P. and Mara, S.T.W., **A Two-stage Heuristic for the Sequence-dependent Job Sequencing and Tool Switching Problems** (*Submitted on September 2020*)
- (7) Kuo, R.J., Mara, S.T.W. and Asih, A.M.S., **A Discrete Multi-objective Sine-Cosine Algorithm for Multi-objective Sustainable Location-Routing Problem** (*Submitted on October 2020*)
- (8) Rifai, A.P., Mara, S.T.W., Ridho, H. and Norcahyo, R., **The Double Row Layout Problem with Safety Consideration: A Two-stage Variable Neighbourhood Search Approach** (*Submitted on October 2020*)
- (9) Mara, S.T.W., Rifai, A.P. and Norcahyo, R., **On Different Formulations for the Multi-Period Vehicle Routing Problem with Simultaneous Pickup and Delivery** (*Submitted on November 2020*)
- (10) Kuo, R.J., Lu, Shih-Hao, Lai, Pei-Yu. and Mara, S.T.W., **Vehicle Routing Problem with Drones Considering Time Windows** (*Submitted on November 2020*)

TEACHING EXPERIENCES

- (1) Industrial Organization and Management (2019/2020, Bachelor level)
- (2) Decision Support System (2019/2020, Bachelor level)
- (3) Mathematical Optimization (2020/2021, Bachelor level)
- (4) Research Methodology (2020/2021, Bachelor level)
- (5) Capstone Design Project (2020/2021, Bachelor level)

CONTACT OF REFEREE(S)

- (1) **Prof. Dr. Ren-Jieh Kuo**
Role: Thesis supervisor in National Taiwan University of Science and Technology
Email: rjkuo@mail.ntust.edu.tw
- (2) **Dr. Achmad Pratama Rifai**
Role: Colleague in Universitas Gadjah Mada, research partner
Email: achmad.p.rifai@ugm.ac.id