



UNIVERSITAS GADJAH MADA

Faculty of Mathematics and Natural Sciences

Department of Mathematics

Sekip Utara Bulaksumur Yogyakarta 55281 Telp: +62 274 552243 Fax: +62 274 555131 Email: math@ugm.ac.id Website: <http://math.fmipa.ugm.ac.id>

STAFF HANDBOOK

Name	Dwi Ertiningsih		
Post	Applied Mathematics		
Academic career	Initial academic appointment	Institution	Year
	Doctoral program:		
	Structural Properties of Single Server Queueing Systems: Efficient Methods via Lumping and Dynamic Programming. Promotor(s): Prof. Dr. Floske Spieksma Prof. Dr. Frank den Hollander	Mathematics, Universiteit Leiden, The Netherlands	2020
	Master Program:		
Probabilistic Fuzzy Multi Objective Programming and Its Application for Inventory Models. Supervisor: Prof. Dr. Widodo, MS	Mathematics, Universitas Gadjah Mada, Indonesia	2017	
Undergraduate Program:			
Multi Objective Nonlinear Programming with Fuzzy Objective Function. Supervisor: Prof. Dr. Widodo, MS	Mathematics, Universitas Gadjah Mada, Indonesia	2015	
Employment	Lecturer	Universitas Gadjah Mada, Indonesia	2008 - Now
Research and development projects over the last 5 years	Accuracy of Medical Image Segmentation and Scheduling Optimization. May – November 2021 Amount of financing: Rp. 50.000.000,00		
	Analysis of Queueing System with Balking, Customer's Impatience, and Working Vacation. March – October 2022 Amount of financing: Rp.15.000.000,00		
	Mathematical Model of the Effect of the Combination of Anti-Angiogenic Therapy and Chemotherapy on Brain Tumor Growth with Drug Resistance. July – November 2023 Amount of financing: Rp.29.900.000,00		



UNIVERSITAS GADJAH MADA

Faculty of Mathematics and Natural Sciences

Department of Mathematics

Sekip Utara Bulaksumur Yogyakarta 55281 Telp: +62 274 552243 Fax: +62 274 555131 Email: math@ugm.ac.id Website: <http://math.fmipa.ugm.ac.id>

	<p>Analysis of the Quasi-Birth-Death (QBD) Process in the Development of a Stochastic SIRI (Susceptible-Infected-Recovery-Infected) Model. July – November 2023 Amount of financing: Rp.29.910.000,00</p> <p>Analysis of Passenger and Airport Taxi Queueing System (On Site) with Random Environment during Service Time Period. March – October 2023 Amount of financing: Rp.15.000.000,00</p>																
<p>Industry collaborations over the last 5 years</p>	<p><i>Project title -</i> <i>Partners -</i></p>																
<p>Patents and proprietary rights</p>	<table border="1"> <thead> <tr> <th data-bbox="490 686 1101 764"><i>Title</i></th> <th data-bbox="1101 686 1372 764"><i>Year</i></th> </tr> </thead> <tbody> <tr> <td data-bbox="490 764 1101 800"> <p>Selected recent publications from a total of approx.</p> </td> <td data-bbox="1101 764 1372 800"></td> </tr> <tr> <td data-bbox="490 800 1101 982"> <p>1. D. Ertiningsih, S. Bhulai, and F. M. Spieksma. <i>A novel use of value iteration for deriving bounds for threshold and switching curve optimal policies.</i> Naval Research Logistics, special issue: Pete Veinott, 65: 638-659, 2018. https://doi.org/10.1002/nav.21824</p> </td> <td data-bbox="1101 800 1372 982"></td> </tr> <tr> <td data-bbox="490 982 1101 1136"> <p>2. D. Ertiningsih, M. N. Katehakis, L. C. Smit, and F. M. Spieksma. <i>Level product form QSF processes and an analysis of queues with Coxian interarrival distribution.</i> Naval Research Logistics, special issue: Uriel Rothblum, 66: 57-72, 2019. https://doi.org/10.1002/nav.21680</p> </td> <td data-bbox="1101 982 1372 1136"></td> </tr> <tr> <td data-bbox="490 1136 1101 1339"> <p>3. Santoso, A. H., Fajrin, H. R., Sultoni, A., & Ertiningsih, D. <i>Penentuan sistem antrean dengan pertimbangan biaya dan kontrol kedatangan pasien: Studi kasus di Puskesmas Ungaran Semarang.</i> Pythagoras: Jurnal Pendidikan Matematika, 15(2): 165-177, 2020. https://doi.org/10.21831/pg.v15i2.35403</p> </td> <td data-bbox="1101 1136 1372 1339"></td> </tr> <tr> <td data-bbox="490 1339 1101 1493"> <p>4. Wijanarko, O. M., and D. Ertiningsih. <i>Optimization Transportation Problem using Generalized Unified Tabu Search: A Study on Ginger Distributions in Java, Indonesia.</i> Advances in Engineering Research, Atlantis Press, 211: 20-26, 2021. https://doi.org/10.2991/aer.k.211222.004</p> </td> <td data-bbox="1101 1339 1372 1493"></td> </tr> <tr> <td data-bbox="490 1493 1101 1717"> <p>5. Muchammad Choerul Arifin, Naelufa Syifna Wifaqotul Muna, Arizka Yuliana, Lingga Sanjaya Putra Mahardhika, Albert Hosea Santoso, Dwi Ertiningsih. <i>Effect Of Covid-19 Patients Flow Rate from ER to LPD on Covid-19 Patients Healing Rates att RSUP Dr. Sardjito's ER.</i> Journal of Indonesian Mathematical Society (JIMS), 28(2): 173-184, 2022. https://doi.org/10.22342/jims.28.2.1041.173-184</p> </td> <td data-bbox="1101 1493 1372 1717"></td> </tr> <tr> <td data-bbox="490 1717 1101 1906"> <p>6. Kusumawati, Miftah A., and Dwi Ertiningsih. <i>Optimization of production and maintenance multiple machines scheduling in batch production system: A case study on the pharmaceutical industry in Central Java, Indonesia.</i> AIP Conference Proceedings, 2566(1): 1, 2022. https://doi.org/10.1063/5.0115860</p> </td> <td data-bbox="1101 1717 1372 1906"></td> </tr> </tbody> </table>	<i>Title</i>	<i>Year</i>	<p>Selected recent publications from a total of approx.</p>		<p>1. D. Ertiningsih, S. Bhulai, and F. M. Spieksma. <i>A novel use of value iteration for deriving bounds for threshold and switching curve optimal policies.</i> Naval Research Logistics, special issue: Pete Veinott, 65: 638-659, 2018. https://doi.org/10.1002/nav.21824</p>		<p>2. D. Ertiningsih, M. N. Katehakis, L. C. Smit, and F. M. Spieksma. <i>Level product form QSF processes and an analysis of queues with Coxian interarrival distribution.</i> Naval Research Logistics, special issue: Uriel Rothblum, 66: 57-72, 2019. https://doi.org/10.1002/nav.21680</p>		<p>3. Santoso, A. H., Fajrin, H. R., Sultoni, A., & Ertiningsih, D. <i>Penentuan sistem antrean dengan pertimbangan biaya dan kontrol kedatangan pasien: Studi kasus di Puskesmas Ungaran Semarang.</i> Pythagoras: Jurnal Pendidikan Matematika, 15(2): 165-177, 2020. https://doi.org/10.21831/pg.v15i2.35403</p>		<p>4. Wijanarko, O. M., and D. Ertiningsih. <i>Optimization Transportation Problem using Generalized Unified Tabu Search: A Study on Ginger Distributions in Java, Indonesia.</i> Advances in Engineering Research, Atlantis Press, 211: 20-26, 2021. https://doi.org/10.2991/aer.k.211222.004</p>		<p>5. Muchammad Choerul Arifin, Naelufa Syifna Wifaqotul Muna, Arizka Yuliana, Lingga Sanjaya Putra Mahardhika, Albert Hosea Santoso, Dwi Ertiningsih. <i>Effect Of Covid-19 Patients Flow Rate from ER to LPD on Covid-19 Patients Healing Rates att RSUP Dr. Sardjito's ER.</i> Journal of Indonesian Mathematical Society (JIMS), 28(2): 173-184, 2022. https://doi.org/10.22342/jims.28.2.1041.173-184</p>		<p>6. Kusumawati, Miftah A., and Dwi Ertiningsih. <i>Optimization of production and maintenance multiple machines scheduling in batch production system: A case study on the pharmaceutical industry in Central Java, Indonesia.</i> AIP Conference Proceedings, 2566(1): 1, 2022. https://doi.org/10.1063/5.0115860</p>	
<i>Title</i>	<i>Year</i>																
<p>Selected recent publications from a total of approx.</p>																	
<p>1. D. Ertiningsih, S. Bhulai, and F. M. Spieksma. <i>A novel use of value iteration for deriving bounds for threshold and switching curve optimal policies.</i> Naval Research Logistics, special issue: Pete Veinott, 65: 638-659, 2018. https://doi.org/10.1002/nav.21824</p>																	
<p>2. D. Ertiningsih, M. N. Katehakis, L. C. Smit, and F. M. Spieksma. <i>Level product form QSF processes and an analysis of queues with Coxian interarrival distribution.</i> Naval Research Logistics, special issue: Uriel Rothblum, 66: 57-72, 2019. https://doi.org/10.1002/nav.21680</p>																	
<p>3. Santoso, A. H., Fajrin, H. R., Sultoni, A., & Ertiningsih, D. <i>Penentuan sistem antrean dengan pertimbangan biaya dan kontrol kedatangan pasien: Studi kasus di Puskesmas Ungaran Semarang.</i> Pythagoras: Jurnal Pendidikan Matematika, 15(2): 165-177, 2020. https://doi.org/10.21831/pg.v15i2.35403</p>																	
<p>4. Wijanarko, O. M., and D. Ertiningsih. <i>Optimization Transportation Problem using Generalized Unified Tabu Search: A Study on Ginger Distributions in Java, Indonesia.</i> Advances in Engineering Research, Atlantis Press, 211: 20-26, 2021. https://doi.org/10.2991/aer.k.211222.004</p>																	
<p>5. Muchammad Choerul Arifin, Naelufa Syifna Wifaqotul Muna, Arizka Yuliana, Lingga Sanjaya Putra Mahardhika, Albert Hosea Santoso, Dwi Ertiningsih. <i>Effect Of Covid-19 Patients Flow Rate from ER to LPD on Covid-19 Patients Healing Rates att RSUP Dr. Sardjito's ER.</i> Journal of Indonesian Mathematical Society (JIMS), 28(2): 173-184, 2022. https://doi.org/10.22342/jims.28.2.1041.173-184</p>																	
<p>6. Kusumawati, Miftah A., and Dwi Ertiningsih. <i>Optimization of production and maintenance multiple machines scheduling in batch production system: A case study on the pharmaceutical industry in Central Java, Indonesia.</i> AIP Conference Proceedings, 2566(1): 1, 2022. https://doi.org/10.1063/5.0115860</p>																	
<p>Important publications over the last 5 years</p>																	



UNIVERSITAS GADJAH MADA
Faculty of Mathematics and Natural Sciences
Department of Mathematics

Sekip Utara Bulaksumur Yogyakarta 55281 Telp: +62 274 552243 Fax: +62 274 555131 Email: math@ugm.ac.id Website: <http://math.fmipa.ugm.ac.id>

	7. Mahardhika, Lingga Sanjaya Putra, Fajar Adi-Kusumo, and Dwi Ertiningsih. <i>Bifurcation analysis of a mathematical model of microalgae growth under the influence of sunlight</i> . BIOMATH. 12(1), 2023. https://doi.org/10.55630/j.biomath.2023.01.307		
Activities in specialist bodies over the last 5 years	Organisation	Role	Period
	1. Secretary of IndoMS (the Indonesian Mathematical Society) period 2020–2022 and 2022-2024. 2. Member of EURO (The Association of European Operational Research Societies). 3. Member of INFORMS (The Institute for Operations Research and the Management Sciences) i.e., an international society for practitioners in the fields of operations research (OR) and management science. 4. Editor Jurnal Matematika "Thales" (JMT) Department of Mathematics FMIPA UGM (Since 2019 – now). 5. Reviewer Journal of the Indonesian Mathematical Society. 6. Reviewer Journal of Jurnal Ilmu Kehutanan. 7. Secretary of the Unit for Supporting Education, Teaching, and Student Affairs Faculty of Mathematics and Natural Sciences UGM (Since February 2022 – now).		