



# UNIVERSITAS GADJAH MADA

Faculty of Mathematics and Natural Sciences

Department of Mathematics

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## STAFF HANDBOOK

Name	<i>Salmah</i>		
Post	<i>Applied Mathematics</i>		
Academic career	<i>Initial academic appointment</i>	<i>Institution</i>	<i>Year</i>
	<i>Doctorate (Math)</i>	<i>UGM</i>	<i>1989</i>
	<i>Master's degree(Math)</i>	<i>ITB</i>	<i>1995</i>
		<i>UGM</i>	<i>2006</i>
Employment	<i>Lecturer</i>	<i>UGM</i>	<i>1991 - Now</i>
Research and development projects over the last 5 years	<p>1. <i>The general form of lower-semi continuous filled functions for global optimization (Bentuk Umum Filled Function Semi- Kontinu Bawah untuk Optimisasi Global), Post-doctoral Universitas Gadjah Mada.</i> <i>Period: 2023</i> <i>Amount of financing : Rp. 85.000.000,-</i></p> <p>2. <i>A Pareto-Lipschitz Approach to the Direct Method for Black-Box Optimization Problems (Pendekatan Pareto-Lipschitz pada Metode Direct untuk Masalah Optimisasi Black-Box), PDD Kemendikbudristek.</i> <i>Period: 2023</i> <i>Amount of financing : Rp 47.200.000,-</i></p> <p>3. <i>Quadratic Linear Dynamic Game Noncooperative Discrete Descriptor System with Diagonal Nonblock Objective Function Matrix (Permainan Dinamis Linear Kuadratis Sistem Deskriptor Diskrit Nonkooperatif dengan Matriks Fungsi Objektif Non Blok Diagonal), FMIPA Research Grant</i> <i>Period: 2023</i> <i>Amount of financing : Rp. 15.000.000,0</i></p> <p>4. <i>Sequential Distributed Predictive Model Control for Large-Scale Systems and Its Application to Irrigation (Kendali Model Prediktif Terdistribusi Sekuensial untuk Sistem Berskala Besar dan Aplikasinya pada Irigasi), RTA Universitas Gadjah Mada</i> <i>Period: 2022</i> <i>Amount of financing : Rp 65.000.000,-</i></p> <p>5. <i>New Coefficients for the Nonlinear Conjugate Gradient Method (Koefisien Baru untuk Metode Gradien Conjugate Nonlinear), PTM, Kemendikbudristek</i></p>		



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	<p><i>Period: 2022</i>  <i>Amount of financing : Rp. 30.000.000,0</i></p> <p><i>6. Application of Sliding Mode Control to Warehousing Problems for Perishable Goods with Multiple Suppliers (Aplikasi Kendali Sliding Mode pada Masalah Pergudangan untuk Barang Mudah Rusak Dengan Pemasok Ganda), FMIPA Research Grant</i>  <i>Period: 2021</i>  <i>Amount of financing : Rp. 15.000.000,0</i></p> <p><i>7. Stock Portfolio Optimization with Predictive Adaptive Control (Optimasi Portofolio Saham dengan Kendali Adaptif Prediktif), FMIPA Research Grant</i>  <i>Period: 2020</i>  <i>Amount of financing : Rp. 15.000.000,0</i></p> <p><i>8. Global Optimum Solution Without Constraints with Non-Parameter Filled Function Method (Solusi Optimum Global Tanpa Kendala dengan Metode Filled Function Non-Parameter), RTA Universitas Gadjah Mada</i>  <i>Period: 2019</i>  <i>Amount of financing : Rp 50.000.000,-</i></p> <p><i>9. Collaboration in Research and Writing in Reputable International Journals on the Topic of Control Design for Traffic Networks (Kerjasama Penelitian dan Penulisan Jurnal Internasional Bereputasi dengan Topik Desain Kendali untuk Jaringan Lalu-Lintas), World Class Professor, DIKTI</i>  <i>Period: 2018</i>  <i>Amount of financing : Rp 255.359.000,-</i></p>				
Industry collaborations over the last 5 years	<p><i>Project title: -</i></p> <p><i>Partners: -</i></p>				
Patents and proprietary rights	<table border="1"> <thead> <tr> <th><i>Title</i></th> <th><i>Year</i></th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	<i>Title</i>	<i>Year</i>		
<i>Title</i>	<i>Year</i>				
Important publications over the last 5 years	<p><i>Selected recent publications from a total of approx. 46</i></p> <ol style="list-style-type: none"> <li><i>Fitriana, V., Salmah, Suparwanto, A., A cooperative game approach to synthesizing a sequential distributed model predictive controller, International Journal of Dynamics and Control, Volume 11, number 5, 2023.</i></li> <li><i>Setiawan, R., Salmah, Endrayanto, I., Indarsih, Analysis of the n-person noncooperative supermodular multiobjective games, Operations Research Letters, Volume 51, Number 3, 2023.</i></li> </ol>				



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	<p>3. Pandiya, R., Salmah, S., Widodo, W., Endrayanto, I., Finding global minima with an inflection point-based filled function algorithm, Numerical Algorithms, 2023, Volume 92, Number 2, 2023.</p> <p>4. Wahyuningtias, L.D.R., Salmah, Global Convergence of Modified RMIL Parametein Conjugate Gradient Method, Engineering Letters, 2023, Volume 31, Number 3, 2023.</p> <p>5. Ulum, Z., Salmah, Suparwanto, A., Solikhatun, The Design of Coalitional Model Predictive Control for Large-Scale Systems, Engineering Letters, Volume 31, Number 1, 2023</p> <p>6. Setiawan, R., Salmah, Endrayanto, I., Indarsih, Analysis of a Single Manufacturer Multi-Retailer Inventory Competition Using Supermodular Multi-Objective Games, Mathematical Modelling of Engineering Problems, Volume 9, Number 3, 2022.</p> <p>7. Ridwan Pandiya, Salmah, Widodo, Irwan Endrayanto, A Class of Parameter-Free Filled Functions for Unconstrained Global Optimization, International Journal of Computational Methods, Volume 19, number 4, 2022</p> <p>8. Vina Fitriana, Salmah, Ari Suparwanto, A Sequentially Updated Distributed Receding Horizon Control Scheme with Application to Irrigation Canal Systems, IAENG International Journal of Applied Mathematics, Volume 52, number 1, 2022.</p> <p>9. Sasmito, A., Salmah, Time-Varying Model Predictive Control for Train Regulation and Passenger Flow in Metro Lines with Sinusoidal Disturbance, IAENG International Journal of Computer Science, Volume 49, number 4, 2022,</p> <p>10. Ridwan Pandiya, Salmah, Widodo, Irwan Endrayanto, Non Parameter-Filled Function for Global Optimization, Applied Mathematics and Computation, Vol. 391/ 2021.</p>			
Activities in specialist bodies over the last 5 years	<table><thead><tr><th><i>Organisation</i></th><th><i>Role</i></th><th><i>Period</i></th></tr></thead></table>	<i>Organisation</i>	<i>Role</i>	<i>Period</i>
<i>Organisation</i>	<i>Role</i>	<i>Period</i>		