

Staff Handbook

Please fill out and submit one table per person.

Name	Dr. Nikenasih Binatari, S.Si., M.Si		
Post	Mathematics		
Academic career	Undergraduate Degree	Universitas Gadjah Mada (UGM)	2006
	Master Degree	Universitas Gadjah Mada (UGM)	2008
	Doctoral Degree	Universitas Gadjah Mada (UGM)	2024
Employment	Position: Lecturer	Employer: UNY	Period: 2008-Now
Research and development projects over the last 5 years	Analisa Bifurkasi Hopf pada Model Penyebaran Penyakit Pneumonia dengan Delay Buatan (Hopf Bifurcation Analysis of Pneumonia Disease Spread Model with Delay) Year: 2025 Partners: Hartono, Fitriana Yuli Saptaningtyas, Dwi Lestari Amount of financing: Rp. 55.000.000,- Analisis dinamik model matematika sistem pengolahan air (Dynamic analysis of water treatment system mathematical model) Year : 2025 Partners : Tien Aminatun, Ali Mahmudi, Fugo Takasu Amount of financing : Rp. 25.000.000,- Kontrol Optimal pada Model Pneumonia Berdasarkan Kelompok Umur dengan Pengobatan dan Vaksinasi Optimal Control of Pneumonia Model by Age Group with Treatment and Vaccination Year : 2025 Partners : Dwi Lestari, Eminugroho Ratna Sari, Amount of financing : Rp. 18.000.000 Identifying Rainfall Patterns using Robust Principal Component Analysis Coupled with Biclustor Analysis Year : 2020 Partners : Sri Andayani, Kismiantini Amount of financing : Rp. 50.000.000		
Industry collaborations over the last 5 years	Workshop on Strengthening Data Analysis and Mathematical Modeling for Indonesian Students at The National Dong Hwa University, Taiwan Year : 2025 Partners : Kismiantini, Wei-Ying Wu, Ezra Putranda Setiawan		

	Amount of financing : Rp. 35.000.000 Industry collaborations: The National Dong Hwa University, Taiwan 2. Pelatihan Eksploratif Geogebra untuk meningkatkan pemahaman matematika perguruan tinggi : Analisis dan Matematika Terapan <i>(Explorative Geogebra training to improve understanding of college mathematics: Analysis and Applied Mathematics)</i> Year : 2025 Partners : Hartono, Dwi Lestari, Ikha Puspita Parwitasari, Fithri Annisatun Lathifah Amount of financing : Rp. 35.000.000 Industry collaborations : Program Studi Matematika FST UIN Sunan Kalijaga Yogyakarta 3. Mari Wujudkan Asta Cita Keselarasan Kehidupan yang Harmonis dengan Lingkungan dan Alam Melalui Pemberdayaan Masyarakat Kota Madya Yogyakarta dalam Penanganan Sampah Organik Berbasis Rekayasa Nanoteknologi Ramah Lingkungan, Berkelanjutan, serta Mandiri: Fase II <i>(Let's Realize Asta Cita Harmony with Environment and Nature Through Empowerment of the People of Madya Yogyakarta in Handling Organic Waste Based on Engineering Nanotechnology Environmentally Friendly, Sustainable, and Independent: Phase II)</i> Year : 2025 Partners : Hartono, Dwi Lestari, Ikha Puspita Parwitasari, Fithri Annisatun Lathifah Amount of financing : Rp. 43.711.000 Industry collaborations : Ibu-Ibu PKK Warungboto Yogyakarta 4. PENINGKATAN KOMPETENSI GURU DI SEKOLAH INDONESIA KOTA KINABALU MELALUI PELATIHAN PEMBELAJARAN BERDIFERENSIASI <i>(IMPROVING TEACHER COMPETENCE IN SEKOLAH INDONESIA KOTA KINABALU THROUGH DIFFERENTIATED LEARNING TRAINING)</i> Year : 2025 Partners : Tien Aminatun, Pujiyanto, Dadan Rosana, Ali Mahmudi Amount of financing : Rp. 50.000.000 Industry collaborations : Sekolah Indonesia Kota Kinabalu 5. Workshop Penguatan Keterampilan Bermatematika dan Strategi Memotivasi Siswa bagi Guru-guru Matematika SMP Kabupaten Kulon Progo <i>(Workshop on Strengthening Mathematical Skills and Student Motivation Strategies for Junior High School Mathematics Teachers in Kulon Progo Regency)</i> Year : 2025 Partners : Husna Arifah, Endah Retnowati, Djamilah Bondan Widjajanti, Atmini Dhoruri Amount of financing : Rp. 10.000.000 Industry collaborations : Junior High School Mathematics Teachers in KULONPROGO Regency	
Patents and proprietary right	Patents (HaKI/HKI) DKN - Fuzzy Simpleks	Year 2020

Important publications over the last 5 years	International Journal Publications (Scopus/WoS Indexed) Binatari, N., van Horssen, W. T., Verstraten, P., Adi-Kusumo, F., & Aryati, L. (2024). On the multiple time-scales perturbation method for differential-delay equations. <i>Nonlinear Dynamics</i>, 112(10), 8431–8451. https://doi.org/10.1007/s11071-024-09485-z Hartono, Binatari, N., Saptaningtyas, F. Y., & Emut. (2024). Limit Cycle on the Forced Vibrations Oscillator with a Time-Varying Mass. <i>International Journal of Differential Equations</i>, 2024(1). https://doi.org/10.1155/2024/1043710 Binatari, N., Adi-Kusumo, F., & Aryati, L. (2022). Stability Regions and Bifurcation Analysis of a Delayed Predator-Prey Model Caused from Gestation Period. <i>International Journal of Differential Equations</i>, 2022, 1–10. https://doi.org/10.1155/2022/3711158 Shaharudin, S. M. (2020). Imputation methods for addressing missing data of monthly rainfall in Yogyakarta, Indonesia. <i>International Journal of Advanced Trends in Computer Science and Engineering</i>, 9(1.4), 646–651. https://doi.org/10.30534/ijatcse/2020/9091.42020 International Conference Proceedings (Scopus Indexed) Setyowisnu, G. E., & Binatari, N. (2024). The derivation of green's function on homogeneous two-dimensional wave equation with Dirichlet boundary condition by using separation of variable method. In <i>AIP Conference Proceedings (Vol. 3081, p. 130002). FRONTIERS IN INDUSTRIAL AND APPLIED MATHEMATICS: FIAM2022.</i> AIP Publishing. https://doi.org/10.1063/5.0133626 Danarwindu, G. A., & Binatari, N. (2022). Green's function for convection diffusion equation with Dirichlet boundary condition using separation variable's method. In <i>AIP Conference Proceedings (Vol. 2575, p. 060001). PROCEEDINGS OF THE 4TH INTERNATIONAL SEMINAR ON INNOVATION IN MATHEMATICS AND MATHEMATICS EDUCATION (ISIMMED) 2020: Rethinking the role of statistics, mathematics and mathematics education in society 5.0: Theory, research, and practice.</i> AIP Publishing. https://doi.org/10.1063/5.0108795 Binatari, N. (2019). A comparison between Cole-Hopf Tranformation and Homotopy Perturbation Method for Viscous Burger Equation in Traffic Flow. <i>Journal of Physics: Conference Series</i>, 1320(1), 012030. https://doi.org/10.1088/1742-6596/1320/1/012030 Binatari, N., & Latip, A. (2019). Coffee prices behavior in the Indonesian market and its implication to derivatives pricing. <i>Journal of Physics: Conference Series</i>, 1320(1), 012023. https://doi.org/10.1088/1742-6596/1320/1/012023
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Additional Publications

9. **Nurfadhilah, D., & Binatari, N. (2021).** *Penyelesaian Masalah Perturbasi pada Persamaan Difusi Konveksi menggunakan Metode Formal Expansion. Jurnal Sains Dasar, 10(1), 11–15.* <https://doi.org/10.21831/jsd.v10i1.39838>

Activities in specialist bodies over the last 5 years	<i>Organisation</i>	<i>Role</i>	<i>Period</i>
	<i>IndoMS DIY-Jateng</i>	<i>Head of Applied Mathematics Studies</i>	<i>2024-2026</i>
	<i>Keluarga Alumni S3 Matematika UGM</i>	<i>Secretary</i>	<i>2025-2027</i>