

Staff Handbook

Please fill out and submit one table per person.

Name	Nur Hadi Waryanto, S.Si., M.Eng.		
Post	Information Technology / IT in Education/ Applied Mathematics		
Academic career	<i>Doctoral Degree (Subject: Applied Mathematics & Statistics)</i> <i>Master Degree (Subject: Applied Mathematics / Optimisation / Data Mining)</i> <i>Undergraduate Degree (Subject: Applied Mathematics)</i>	- Universitas Gadjah Mada (UGM), Indonesia Universitas Negeri Yogyakarta (UNY), Indonesia	- 2010 2002
Employment	Position: Lecturer	Employer: UNY	Period: Dec 2003 - Current
Research and development projects over the last 5 years	1. Pengolahan Citra Digital Untuk Deteksi Wajah Dan Analisis Ekspresi (<i>Digital Image Processing for Face Detection and Expression Analysis</i>) Year: 2020 Partners: Sri Andayani, Bambang Sumarno (UNY, Indonesia) Amount of financing: Rp. 18.000.000,- 2. Deteksi Kontraksi Dan Kelainan Mata Dari Citra Digital Iris Mata (<i>Detection of Eye Contractions and Abnormalities from Digital Images of the Iris</i>) Year: 2021 Partners: Sri Andayani, Bambang Sumarno (UNY, Indonesia) Amount of financing: Rp. 18.000.000,- 3. Klasifikasi Jenis Paparan Teks menggunakan Jaringan Syaraf Tiruan (<i>Classification of Text Exposure Types using Artificial Neural Networks</i>) Year: 2022 Partners: Sri Andayani, Bambang Sumarno, Thesa Adi Saputra Yusri (UNY, Indonesia) Amount of financing: Rp. 24.000.000,- 4. Pemahaman Guru terhadap Konsep Cybergogy dalam Pembelajaran (<i>Teachers' Understanding of the Concept of Cybergogy in Learning</i>) Year: 2022 Partners: Heri Retnawati, Wahyu Setyaningrum (UNY, Indonesia) Amount of financing: Rp. 15.000.000,- 5. Pengembangan Media Simulasi Berbasis Geogebra Book (<i>Development of Geogebra-Based Simulation Media Book</i>) Year: 2023 Partners: Wahyu Setyaningrum, Sahid, Murdanu (UNY, Indonesia) Amount of financing: Rp. 24.000.000,-		

	6. Pengembangan E-Modul Matematika Numerasi SMP Untuk Mendukung Pembelajaran Cybergogy <i>(Development of Junior High School Numeracy E-Modules to Support Cybergogy Learning)</i> Year: 2023 Partners: Wahyu Setyaningrum, Heri Retnawati (UNY, Indonesia) Amount of financing: Rp. 15.000.000,- 7. Pengembangan Local Instructional Theory Berbasis Realistic Mathematics Education (RME) dan Etnomatematika Berbantuan Augmented Reality <i>(Development of Local Teaching Theory Based on Realistic Mathematics Education (RME) and Ethnomathematics with the Assistance of Augmented Reality)</i> Year: 2023 Partners: Sugiman (UNY, Indonesia), Ahmad Fauzan (UNP, Indonesia), Rahmah Johar, Lathiful Anwar Amount of financing: Rp. 50.000.000,- 8. Pengembangan Learning Management System (LMS) untuk Mendukung Model Pembelajaran Cybergogy <i>(Development of a Learning Management System (LMS) to Support the Cybergogy Learning Model)</i> Year: 2024 Partners: Wahyu Setyaningrum, Sahid, Murdanu (UNY, Indonesia) Amount of financing: Rp. 24.000.000,- 9. Klasifikasi Keberhasilan Mahasiswa di Perguruan Tinggi dan Faktor-faktor Determinasinya <i>(Classification of Student Success in Higher Education and Determining Factors)</i> Year: 2024 Partners: Jaelani, Kana Hidayati (UNY, Indonesia) Amount of financing: Rp. 45.000.000,- 10. Pengembangan Video Pembelajaran Model Motion Graphic sebagai Media Model Pembelajaran Cybergogy <i>(Development of Motion Graphic Model Learning Videos as a Cybergogy Learning Model Media)</i> Year: 2025 Partners: Wahyu Setyaningrum, Sahid, Murdanu (UNY, Indonesia) Amount of financing: Rp. 24.000.000,- 11. Penggunaan Artificial Intelligence Dalam Mengolah Dan Mentransfer Mathematical Didactic Knowledge: Studi Eksplanatori Pada Calon Guru Matematika <i>(The Use of Artificial Intelligence in Processing and Transferring Mathematical Didactic Knowledge: An Explanatory Study of Prospective Mathematics Teachers)</i> Year: 2025 Partners: Sugiman, Siti Kholifah (UNY, Indonesia) Amount of financing: Rp. 55.000.000,- 12. Model Ethnomath Digital Edutainment (EDE) untuk Penguatan Kemampuan Numerasi dan Literasi Budaya Siswa Sekolah Menengah <i>(Ethnomath Digital Edutainment (EDE) Model for Strengthening Numeracy and Cultural Literacy Skills of Secondary School Students)</i> Year: 2025
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	Partners: Marsigit, Ariyadi Wijaya, Wahyu Setyaningrum (UNY, Indonesia) Amount of financing: Rp. 150.000.000,-
Industry collaborations over the last 5 years	1. Peningkatan Kemampuan Pengelolaan Kelas Daring Guru Matematika SMP melalui Penerapan Elearning dengan Platform Schoology <i>(Improving the Online Classroom Management Skills of Junior High School Mathematics Teachers through the Implementation of E-learning with the Schoology Platform)</i> Year: 2020 Partners: Sri Andayani, Bambang Sumarno, Rosnawati, Tuharto (UNY, Indonesia) Amount of financing: Rp. 9.000.000,- Industry collaborations: Wonosobo Regency Mathematics Teacher Working Group (MGMP) 2. Pelatihan Penyusunan Media Pembelajaran Matematika Daring Yang Inovatif, Interaktif, Dan Dapat Meningkatkan Pemahaman Matematis <i>(Training on Developing Innovative, Interactive Online Mathematics Learning Media that Can Improve Mathematical Understanding)</i> Year: 2021 Partners: Endah Retnowati, Djamilah Bondan Wijayanti, Bambang Sumarno, Sri Andayani, Endang Listyani (UNY, Indonesia) Amount of financing: Rp. 9.000.000,- Industry collaborations: Kulon Progo Regency Mathematics Teacher Working Group (MGMP) 3. Pelatihan Pengembangan Video Pembelajaran Bagi Guru Untuk Meningkatkan Pemahaman Cybergogy Dalam Pembelajaran Di Sekolah <i>(Training on Developing Educational Videos for Teachers to Improve Understanding of Cybergogy in School Learning)</i> Year: 2023 Partners: Bambang Sumarno, Sri Andayani, Kuswari Hernawati, Thesa Adi Saputra Yusri (UNY, Indonesia) Amount of financing: Rp. 8.000.000,- Industry collaborations: Sleman Regency Mathematics Teacher Working Group (MGMP) 4. Pelatihan Pengembangan Video Pembelajaran Dan Kuis Interaktif Berbantuan Software Lumi <i>(Training on Developing Educational Videos and Interactive Quizzes Using Lumi Software)</i> Year: 2023 Partners: Bambang Sumarno, Sri Andayani, Kuswari Hernawati, Thesa Adi Saputra Yusri (UNY, Indonesia) Amount of financing: Rp. 8.000.000,- Industry collaborations: Sleman Regency Mathematics Teacher Working Group (MGMP) 5. Penguatan Literasi Numerasi dengan Memaksimalkan Pemanfaatan Artificial Intelligence (AI) <i>(Strengthening Numeracy Literacy by Maximizing the Use of Artificial Intelligence (AI))</i> Year: 2024 Partners: Wahyu Setyaningrum, Sahid, Murdanu (UNY, Indonesia) Amount of financing: Rp. 8.000.000,-

	Industry collaborations: Sleman Regency Mathematics Teacher Working Group (MGMP) 6. Diseminasi Didaktis Numerasi Berbantuan Augmented Reality di Sekolah Wilayah Yogyakarta (Dissemination of Augmented Reality-Assisted Numeracy Teaching in Schools in the Yogyakarta Region) Year: 2024 Partners: Sugiman (UNY, Indonesia) Amount of financing: Rp. 25.000.000,- Industry collaborations: Sleman Regency Mathematics Teacher Working Group (MGMP) 7. Pemanfaatan Media Berbasis Artificial Intelligence dalam Pembelajaran di Sekolah untuk Meningkatkan Literasi IT (Utilization of Artificial Intelligence-Based Media in School Learning to Improve IT Literacy) Year: 2025 Partners: Wahyu Setyaningrum, Sahid, Murdanu (UNY, Indonesia) Amount of financing: Rp. 8.000.000,- Industry collaborations: Yogyakarta City Education, Youth, and Sports Agency 8. Workshop Optimalisasi Chatbot AI sebagai Scaffolding Untuk Pembelajaran Matematika Tingkat SMA (Workshop on Optimizing AI Chatbots as Scaffolding for High School Mathematics Learning) Year: 2025 Partners: Sugiman, Siti Kholifah (UNY, Indonesia) Amount of financing: Rp. 35.000.000,- Industry collaborations: Yogyakarta City Education, Youth, and Sports Agency 9. Pelatihan Pembelajaran Mendalam Berbantuan Teknologi Digital untuk Guru Sekolah Indonesia CairoTingkat SMA (Digital Technology-Assisted Deep Learning Training for Indonesian School Teachers in Cairo at the High School Level) Year: 2025 Partners: Ariyadi Wijaya, Wahyu Setyaningrum (UNY, Indonesia), Agus Qomarudin (Kairo) Amount of financing: Rp. 35.000.000,- Industry collaborations: Yogyakarta City Education, Youth, and Sports Agency
Patents and proprietary rights	1. GUI (Graphical User Interface) K-Means Clustering untuk Kesejahteraan Rakyat Provinsi Papua Barat (GUI (Graphical User Interface) K-Means Clustering for the Welfare of the People of West Papua Province) Application No.: EC002022103265 Inventors: Nur Hadi Waryanto, S.Si., M.Eng., Merina Dwi Pangesti Patent Holder: DRPM Universitas Negeri Yogyakarta Type: @Copyright 2. Jenius Cemerlang (Brilliant Genius) No. Permohonan : EC00202023317 Inventor : Nur Hadi Waryanto Pemegang Paten : LPPM UNY Type : @Copyright 3. Permainan Video Argeo (Argeo Video Game) No. Permohonan : EC00201976197 check_circle DJKI Source

	Inventor : Wahyu Seryaningrum, M.Ed., Ph.D. Nur Hadi Waryanto, S.Si., M.Eng. Dr. Ali Mahmudi Aji Pangestu Paten Holder : Wahyu Seryaningrum, M.Ed., Ph.D. Nur Hadi Waryanto, S.Si., M.Eng. Dr. Ali Mahmudi Aji Pangestu Type : @Copyright 4. Program Komputer Sistem Informasi Indekos <i>(Indekos Information System Computer Program)</i> Application No.: EC00201973039 Inventor: Rizal Pamungkas, Nur Hadi Waryanto, S.Si., M.Eng. Patent Holder: Rizal Pamungkas, Nur Hadi Waryanto, S.Si., M.Eng. Type : @Copyright 5. Program Komputer Sistem Pendukung Keputusan Pemilihan Tempat Wisata <i>(Computer Program for Tourist Destination Selection Decision Support System)</i> Application No.: EC00201973040 Inventor: June M Irfansyah, Nur Hadi Waryanto, S.Si., M.Eng Patent Holder: June M Irfansyah, Nur Hadi Waryanto, S.Si., M.Eng Type : @Copyright 6. Media Pembelajaran Edutainment : “Proadventure” <i>(Edutainment Learning Media: “Proadventure”)</i> Application No.: EC00201859155 Inventor: Wahyu Setyaningrum, Ph.D, Nur Hadi Waryanto, S.Si., M.Eng., Ahmad Bahauddin Patent Holder: Wahyu Setyaningrum, Ph.D, Nur Hadi Waryanto, S.Si., M.Eng., Ahmad Bahauddin Type : @Copyright 7. Media Pembelajaran Edutainment : Mathventure <i>(Edutainment Learning Media: Mathventure)</i> Application No.: EC00201846965 Inventor: Wahyu Setyaningrum, Ph.D., Nur Hadi Waryanto, S.Si., M.Eng., Riska Ayu Ardani Patent Holder: Wahyu Setyaningrum, Ph.D., Nur Hadi Waryanto, S.Si., M.Eng., Riska Ayu Ardani Type : @Copyright 8. Media Pembelajaran Edutainment : “Circle” <i>(Edutainment Learning Media: “Circle”)</i> Application No.: EC00201846964 Inventor: Wahyu Setyaningrum, Ph.D., Nur Hadi Waryanto, S.Si., M.Eng., Wan Denny Pramana Putra Patent Holder: Wahyu Setyaningrum, Ph.D., Nur Hadi Waryanto, S.Si., M.Eng., Wan Denny Pramana Putra Type : @Copyright
Important publications over the last 5 years	International & National Journal Publications 1. NH Waryanto, Heri Retnawati, Wahyu Setyaningrum, Nur Insani, Yanuar Hery Murtianto, Caturiyati, Vivi RR Rianto Fuzzy Logic-Based Clustering of Teacher Digital Pedagogy Using Cybergogy Framework for Sustainable Educational Innovation <i>Advance Sustainable Science, Engineering and Technology (ASSET) Vol. 7, No.3, July 2025</i> https://doi.org/10.26877/asset.v7i3.1946 (Q4-Indexed) 2. Hidayati, Eminugroho Ratna Sari, NH Waryanto. Mathematical model of cholera spread based on SIR: Optimal control

	PYTHAGORAS: Jurnal Pendidikan Matematika, Vol. 16, No. 1, Dec. 2021. ISSN 2527-421X https://doi.org/10.21831/pg.v16i1.35729 (Sinta 2-Indexed) International Conference 3. Sri Andayani ; Thesa Adi Saputri Yusri; Bambang Sumarno Hadi Marwoto; Nur Hadi Waryanto Images processing for myopia detection using artificial neural networks THE 5TH INTERNATIONAL SEMINAR OF INNOVATION IN MATHEMATICS AND MATHEMATICS EDUCATION (5th ISIMMED) AND THE 7TH INTERNATIONAL SEMINAR ON SCIENCE EDUCATION (7th ISSE) 2024 https://doi.org/10.1063/5.0133367 (Q4 Indexed). 4. Sri Andayani, Nur H. Waryanto, Bambang S. H. Marwoto, Monica M.Hapsari Exploitation of Nasolabial Folds for Happy Smile Recognition on an Image Using ANN Advances in Social Science, Education and Humanities Research, volume 528 Proceedings of the 7th International Conference on Research, Implementation, and Education of Mathematics and Sciences (ICRIEMS 2020) 5. Fikri Yansah, NH Waryanto. Face detection system using principal component analysis (PCA) method with eigenface algorithm Proceedings of the 4th International Seminar on Innovation in Mathematics and Mathematics Education (ISIMMED) 2020 AIP Conf. Proc. 2575, 030004-1–030004-7; https://doi.org/10.1063/5.0109551 (Q4 Indexed) 5. S Andayani, B Sumarno HM and NH Waryanto Comparison of PROMETHEE -TOPSIS method based on SAW and AHP weighting for school e-learning readiness evaluation Journal of Physics: Conference Series, Volume 1581, The 3rd International Seminar on Innovation in Mathematics and Mathematics Education (ISIMMED 2019) 3-4 October 2019, Yogyakarta, Indonesia (Q4 Indexed)		
Activities in specialist bodies over the last 5 years	Organisation	Role	Period
	Indonesia Mathematics Society (IndoMS)	Member	2021 - current
	National Committee for the Competency Test for Students in the Teacher Professional Program (Kemdikristek RI)	Member Of IT Division	2018 - 2022
	National Committee for the Competency Test for Students in the Teacher Professional Program (Kemenag RI)	Member of IT Division	2023 - Current

	<i>National Committee for Competency Testing of Participants in the Teacher Professional Program (UKPPPG Kemendikdasmen RI)</i>	<i>Member of IT Division</i>	<i>2023 - Curretn</i>
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