Staff Handbook

Please fill out and submit one table per person.

Name	*Prof. Wahyu Setyaningrum, Ph.D*		
Post	*Mathematics Education*		
Academic career	*Initial academic appointment* Habilitation *[German post-doctoral qualification] (subject)* *Doctorate (Philosophy)* *Master (Mathematics & Science Education)* *Undergraduate degree (Maths Education)*	*Institution* *Institution* *University of Dundee* *Monash University* *Universitas Negeri Yogyakarta*	*Year* *Year* *2016* *2009* *2003*
Employment	*Position* *Associate Professor*	*Employer* *Universitas Negeri Yogyakarta*	*Period* *2003-Now*
Research and development projects over the last 5 years	▪ Media Pembelajaran Matematika Berbasis Augmented Reality untuk Meningkatkan Literasi Digital di Era Industri 4.0 (2019-2020), IDR 469.000.000. ▪ Implementasi STEM Berbasis Augmented Reality di Malaysia dan Indonesia, (2020), IDR 50.000.000. ▪ Penggunaan Game Edukasi dalam Pembelajaran Matematika: Studi Kasus di SMP kelas 7 dan 8 (2022), IDR 50.000.000. ▪ Pengembangan e-modul Pembelajaran Diferensiasi Beroerientasi pada Numerasi dan Ketrampilan Abad 21 (2022), IDR 50.000.000. ▪ Analisis Kompetensi Literasi Digital untuk Memetakan Kesiapan Digital Learning Siswa SMP pada Pembelajaran Matematika (2023), IDR 40.000.000. ▪ Efektivitas Media Desmos untuk meningkatkan PemahamanKomunikasi Matematis dan Self Directed Learning Siswa SMP (2023), IDR 35.000.000. ▪ Simulasi Digital untuk Mengembangkan Kemampuan BerpikirKomputasional dan Numerasi (2023), IDR 35.000.000. ▪ Model pembelajaran berbasis virtual reality untuk meningkatkan kemampuan numerasi (2023), IDR 150.000.000. ▪ Model pembelajaran berbasis virtual reality untuk meningkatkan kemampuan numerasi dan growth mindset siswa (2024), IDR 127.000.000. ▪ Survei Kompetensi Literasi Digital dan Numerasi untuk Memetakan Kesiapan Siswa SMP di Jateng dan DIY dalam Menghadapi Pembelajaran Berbasis Artificial Intelligence (2024), IDR 50.000.000. ▪ Model Asesmen Kesiapan Penggunaan Artificial Intelligence (AI) Mahasiswa S1 Calon Guru Sekolah Dasar pada Pembelajaran Matematika (2024), IDR 50.000.000.		

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Implementasi Didactical Games Design dalam Peningkatan Pengetahuan Didaktis Calon Guru Sekolah Dasar untuk Mengajar Numerasi (2024), IDR 195.000.000.
odel Didaktis Materi Peluang di SMP Berbantuan Aplikasi Coding (2024), IDR 45.000.000.
Pengembangan Video Pembelajaran Model Motion Graphic sebagai Media Model Pembelajaran Cybergogy (2025), IDR 24.000.000.
Developing Digital Competence Framework for Mathematics Teacher: Interconnected Practices between Indonesia and Malaysia (2025), IDR 65.000.000.
Analisis Hambatan Penyelesaian Studi Mahasiswa S3 Pendidikan Matematika dan Solusinya (2025), IDR 55.000.000.
Pengembangan modul digital untuk meningkatkan Mathematical Knowledge for Teaching Numeracy calon guru (2025), IDR 55.000.000
Model Ethnomath Digital Edutainment (EDE) untuk Penguatan Kemampuan Numerasi Siswa Sekolah Menengah (2025), IDR 105.000.000.

</td></tr>
<tr><td>Industry collaborations over the last 5 years</td><td>Project title: Workshop Pembuatan Bahan Ajar Matematika Berbasis Markdown Bagi Guru Matematika SMA
Partners: MGMP Matematika SMA Kabupaten Bantul
Year: 2021

Project title: Pemanfaatan Liveworksheet sebagai Inovasi Pembelajaran Matematika SMA
Partners: MGMP SMA Ma’arif Yogyakarta
Year: 2023

Project title: Penguatan Literasi Numerasi dengan Memaksimalkan Pemanfaatan Artificial Intelligence (AI)
Partners: SMP Muhammadiyah 3 Yogyakarta
Year: 2024

Project title: Pemanfaatan Media Berbasis Artificial Intelligence dalam Pembelajaran di Sekolah untuk Meningkatkan Literasi IT
Partners: Dinas Pendidikan Pemuda dan Olahraga Kota Yogyakarta
Year: 2025</td></tr>
<tr><td>Patents and proprietary rights</td><td>Selected recent patents and proprietary rights from a total of approx 30
<table>
<tr><th>No</th><th>Tittle</th><th>Year</th></tr>
<tr><td>1</td><td>Digital modul for learning vector</td><td>2020</td></tr>
<tr><td>2</td><td>VektAR: Augmented Reality for vector</td><td>2020</td></tr>
<tr><td>3</td><td>Digital Modul for Cone and cylinders and problem solving skills</td><td>2020</td></tr>
<tr><td>4</td><td>KERUBUNG: Augmented Reality for cones and cylinders</td><td>2020</td></tr>
<tr><td>5</td><td>Madmatics: Scaffolding based Digital media</td><td>2021</td></tr>
<tr><td>6</td><td>Peta Gembi AR</td><td>2022</td></tr>
<tr><td>7</td><td>GEMBi AR</td><td>2023</td></tr>
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	8	Math a Meal	2023
	9	Numeru-SD	2023
	10	Math a Meal	2024
	11	E-modul embeded Desmos for learning maths	2024
	12	Maths communication Instrument for linear equation system	2024
	13	Numerasi Farm: Virtual Reality game for numeracy	2024
	14	NUMERU-SD: e-modul for maths teachers	2024

Important publications over the last 5 years

Selected recent publications from a total of approx.
(give total number): 40

Tittle	Name, Year, Volume, Issue
Pre-service teacher's pedagogical content knowledge: What teachers know about students' errors?	Journal of Physics: Conference series. Vol 1581, 2020
The Effectiveness of Augmented Reality in Learning Vector to improve Students' Spatial and Problem-solving Skills	International Journal of Interactive Mobile Technologies (iJIM). Vol 15, No. 05
RPG-based digital media for mathematics learning post Covid-19 pandemic: Indonesian student's acceptance	AIP Conference Proceedings, 2022, 2575, 080005, 0094243x
Mathematics learning based on augmented reality: A relevant mathematics teaching content and enhanced student abilities	AIP Conference Proceedings, 2022, 2575, 080006, 0094243x
An Integrative Learning Model to Improve Problem-Solving and Creative Thinking Abilities, Collaboration, and Motivation	Islamic Guidance and Counseling Journal Vol 6, No 2, p 1-21 2023
Promoting Problem-Solving Skills by Engaging Students in Detecting, Explaining and Fixing Errors in Applications of the First Derivative in Individual and Collaborative Settings	Center for Educational Policy Studies Journal 2024
The effect of scaffolding-based digital instructional media on higher order thinking skills	Journal on Mathematics Education, 2024
Enhancing Higher-Order Thinking and Conceptual Understanding through STEM-PjBL: A Comprehensive Assessment of Its Impact on Education	Indonesian Journal of Educational Research and Review, Volume 7 Nomor 3 2024

Activities in specialist bodies over the last 5 years

Organisation	*Role*	*Period*
NCTM	*Member*	*2020-2022*