

Staff Handbook

Geophysics Study Program

Name	Dr. Muhammad Taufiq Rafie, S.Si. M.T		
Post	Computational Geophysics, Mathematical Geophysisc and Earthquake Geomechanic – Assistant Professor		
Academic career		Institution	Year
	Initial Academic Appointment	Hasanuddin University	2022
	Doctor Degree	Institut Teknologi Bandung	2022
	Master Degree	Institut Teknologi Bandung	2019
	Undergraduate Degree	Hasanuddin University	2016
Employment	Position	Employer	Period
	Associate Professor (Lektor)	Hasanuddin University	
Research and development projects over the last 5 years	Research Project: Thematic Research Group UNHAS Research Title: Pemodelan Tsunami Terintegrasi untuk Mengkaji Ancaman Tsunami di Sekitar Pualu Sulawesi Berdasarkan Aktivitas Sumber Gempa Aktif Period: 2025 Fund: Rp. 60.000.000 Partners: Sabrianto, Aswad, M. Alimuddin, Erfan, M. Fawzy, A. M. Pramadi, Saaduddin, Hendra Pachri, Purwanto, M.Taufiq Rafie Research Project: Kedaireka Matching Fund Research Title: Implementasi Rekayasa Eksplorasi Endapan Nikel Laterit melalui Integrasi Data ERT dan Data Geologi dalam Menyokong Industri Baterai di Indonesia Period: 2024 Fund: Rp. 744.830.000 Partners: Sabrianto, Aswad, M. Alimuddin, Erfan, M. Fawzy, A. M. Pramadi, Saaduddin, Hendra Pachri, Purwanto, M.Taufiq Rafie Research Project: Hibah Internal Penelitian Penelitian Fundamental Kolaboratif, LPPM Unhas (Research Member) Research Title: Analisis Komprehensif Kawasan Rawan Bencana Gempabumi di Wilayah Sulawesi Bagian Tengah Period: 2024 Fund: Rp. 64.000.000 Partners: M. Altin Massinai Research Project: Hibah Penelitian Internal Fakultas MIPA, Universitas Hasanuddin (Research Member) Research Title: Analisis tegasan Coulomb pada sesar Poso akibat gempa 2017 Mw 6.7 Poso dan 2018 Mw 7.5 Palu-Donggala: Implikasinya terhadap mitigasi resiko gempabumi di Sulawesi		

	Period: 2023 Fund: Rp. 20.000.000 Partners: M. Altin Massinai, M. Alimuddin H., Erfan.			
Industry collaborations over the last 5 years	Project title		Partners	
	Multichannel analysis of surface wave (MASW) for Geotechnical Engineering Survey at PT Vale Indonesia Tbk		PT. Vale Indonesi Tbk.	
Patents and proprietary rights	Title		Year	
	-		-	
Important publications over the last 5 years	Title	Journal/Book	Year	Author/Co-author(s)
	Analysis of stress changes on the Poso fault caused by large inland earthquakes: Case study of the 2017 Mw 6.6 Poso and the 2018 Mw 7.5 Palu-Donggala earthquakes	Annals of Geophysics	2024	Author: M. Altin M. Co-author(s): M. Taufiq R., Tsaqif R., M. Alimuddin H., Erfan, Maria
	Mapping low earthquake risk areas in North Maluku Indonesia	MAUSAM	2024	Author: M. Farid W. Co-author(s): M. Altin M.m M. Fawzy I., M, Taufiq R., Aini S., M.L. Saputra
	Mantle flow induced by the interplay of downgoing slabs revealed by seismic anisotropy beneath the Sula block in eastern Indonesia	Journal of Geophysical Research: Solid Earth	2024	Author: Lingmin Cao Co-author(s): ChuanChuan Lu, M. Taufiq R. et. Al.
	The importance of detail fault geometry in modeling the stress change caused by large earthquake: Case study of 2017 Mw 6.7 Poso earthquake	IOP Conf. Series: Earth and Enviromental Science	2023	Author: T. Razin Co-author(s): M.Taufiq R. M.Altin M., M. Alimuddin H., Erfan
	Stress accumulation and earthquake activity on the Great Sumatran Fault, Indonesia	Natural Hazards	2023	Author: M. Taufiq R. Co-author(s): David P.S., Philr.

				Cummins, et. al.
	The Perturbation of Background Stress Field Along Sunda Subduction Margin During 2004 Mw 9.1 Off-Sumatera Earthquake	Advances in Science, Technology & Innovation (ASTI), Springer, Cham	2022	Author: M. Taufiq R. Co-author(s): David P.S., Sri Widiyantoro, et. al.
	Preliminary study of stress changes evolution on central part of Sumatran Fault influenced by large interplate earthquakes and tectonic stress rates	IOP Conf. Series: Earth and Environmental Science	2021	Author: M. Taufiq R. Co-author(s): David P.S., Sri Widiyantoro, et. al.
	Variations in Forearc Stress and Changes in Principle Stress Orientations Caused by the 2004-2005 Megathrust Earthquakes in Sumatra, Indonesia	Frontiers in Earth Science	2021	Author: M. Taufiq R. Co-author(s): David P.S., Sri Widiyantoro, et. al.
	Source mechanism and triggered large aftershock of the Mw 6.5 Ambon, Indonesia earthquake	Tectonophysics	2021	Author: David P. S. Co-author(s): Andri D. Nugraha, M. Taufiq R. et. al.
Activities in specialist bodies over the last 5 years	Organisation	Role		Period
	Himpunan Ahli Geofisika Indonesia Korwil Sul-Sel-Bar	Member		2022-2024