

DAFTAR PUSTAKA

- Alwi, M., & Mutaqin, B. W. (2022). Geospatial mapping of tsunami susceptibility in Parangtritis coastal area of Yogyakarta, Indonesia. *Arabian Journal of Geosciences* 15, No. 15, 1332.
- Amelia, R., & Indrawan, I. B. (2017). Penyelidikan Geologi Teknik Lokasi Bandara Baru di Daerah Istimewa Yogyakarta. *Seminar Nasional Kebumihan ke-10 Peran Penelitian Ilmu Kebumihan dalam Pembangunan Infrastruktur di Indonesia* (hal. 35-57). Yogyakarta: Universitas Gadjah Mada.
- Andrus, R. D., Stokoe, K. H., & Juang, C. H. (2004). Guide for shear-wave-based liquefaction potential evaluation. *Earthquake Spectra*, 285-308.
- Andrus, R., & Stokoe II, K. (2000). Liquefaction Resistance of Soils from Shear-Wave Velocity. *Journal of Geotechnical and Geoenvironmental Engineering*, 1015-1025.
- Ardiansyah, Y., Satyarno, I., Triatmadja, R., & Supraba, I. (2022). Evaluasi Sistem Drainase Underpass Yogyakarta International Airport (YIA). *Rang Teknik Journal* 5, No. 2, 225-234.
- Asnawi, Y., Simanjuntak, A., Muksin, U., Rizal, S., Syukri, M., Maisura, M., & Rahmati, R. (2022). Analysis of Microtremor H/V Spectral Ratio and Public Perception for Disaster Mitigation. *International Journal of GEOMATE*, 123-130.
- Badan Geologi. (1998, January 1). *GeoMap*. Diambil kembali dari Peta Geologi Indonesia, Lembar Surabaya: <https://geologi.esdm.go.id>
- Badan Geologi. (2013, January 1). *GeoMap*. Diambil kembali dari Peta Geologi Interpretasi Citra Inderaan Jauh Lembar Wates, DI Yogyakarta: <https://geologi.esdm.go.id>
- Badan Geologi. (2016). *Geomagz : Majalah Geologi Populer*. Jakarta: Kementerian Energi dan Sumber Daya Mineral.
- Badan Geologi. (2016). *Pusat Vulkanologi dan Mitigasi Bencana Geologi*. Diambil kembali dari Gerakan Tanah: <https://vsi.esdm.go.id>
- Badan Informasi Geospasial. (2023). *Seamless Digital Elevation Model (DEM) dan Batimetri Nasional*. Retrieved from Seamless Digital Elevation Model (DEM) dan Batimetri Nasional: <https://tanahair.indonesia.go.id/demnas>
- Badan Standarisasi Nasional. (2017). *SNI 8460:2017 Persyaratan perancangan geoteknik*. Jakarta: Badan Standarisasi Nasional.
- BAPPENAS. (2006). *Preliminary Damage and Loss Assessment Yogyakarta and Central Java Natural Disaster*. Jakarta: Badan Pembangunan Nasional Republik Indonesia.
- Batra, S. S., & Walia, B. (2021). One-Dimensional Ground Response Analysis of Some Typical Sites in Ludhiana City. *Proceedings of the Indian Geotechnical Conference 2019* (hal. 373-383). Singapore: Springer.
- Bentley, Inc. (2022, 2). *Plaxis 2D*. Diambil kembali dari Plaxis 2D: <https://www.bentley.com>
- Bird, P. (2003). An updated digital model of plate boundaries. *Geochemistry, Geophysics, Geosystems*, 4, No. 3, 1-52.
- Biro Komunikasi Publik. (2020, February 5). *Diresmikan Presiden Jokowi, Underpass YIA Dukung Pansela sebagai Jalur Wisata*. Diambil kembali dari SIMANTU Kementerian PUPR: <https://simantu.pu.go.id/content/?id=1844>
- Buana, T. W., Hermawan, W., Rahdiana, R. N., Wahyudin, R. W., Hasibuan, G., Wiyono, & Solliu, W. P. (2019). *Atlas Zona Kerentanan Likuefaksi Indonesia*. Jakarta: Badan Geologi Pusat Air Tanah dan Geologi Tata Lingkungan.
- Bupati Kulon Progo. (2023). *Rencana Detail Tata Ruang Kawasan Sekitar Bandara Internasional Yogyakarta Tahun 2023-2043*. Kulon Progo: Pemerintah Kabupaten Kulon Progo.



- Chou, J. C., Kutter, B. L., Travasarou, T., & Chacko, J. M. (2011). Centrifuge modeling of seismically induced uplift for the BART transbay tube. *Journal of Geotechnical and Geoenvironmental Engineering* 137, No. 8, 754-765.
- Costel, P., & Rotaru, A. (2010). Aspects Concerning the Improvement of Soils Against Liquefaction. *Bulletin of the Polytechnic Institute of Jassy*, 39-46.
- Dewanto, B. G., Haryanto, Y., & Purnomo, N. S. (2021). Land Subsidence Potential Detection in Yogyakarta International Airport using Sentinel-1 Insar Data. *Civil Engineering Dimension* 23, No. 2, 91-99.
- Elnashai, A. S., Kim, S. J., Yun, G. J., & Sidarta, D. (2007). *The Yogyakarta Earthquake of May 27, 2006*. University of Illinois at Urbana-Champaign: Mid-America Earthquake Center CD Release 07-02.
- Haerudin, N., Alami, F., & Rustadi. (2019). *Mikroseismik, Mikrotremor dan Microearthquake Dalam Ilmu Kebumihan*. Bandarlampung: Pusaka Media.
- Hardiyatmo, H. C. (2002). *Mekanika Tanah 1*. Yogyakarta: Gadjah Mada University Press.
- Hardiyatmo, H. C. (2022). *Rekayasa Gempa untuk Analisis Struktur dan Geoteknik*. Yogyakarta: Gadjah Mada University Press.
- Hartono, N., & Fathani, T. F. (2022). The Using of GIS to Delineate the Liquefaction Susceptibility Zones at Yogyakarta International Airport. *Civil Engineering Dimension* 24, No. 1, 62-70.
- Hashash, Y. M., Hook, J. J., Schmidt, B., John, I., & Yao, C. (2001). Seismic design and analysis of underground structures. *Tunnelling and underground space technology* 16, No. 4, 247-293.
- Hendrayana, H., Widyastuti, M., Riyanto, I. A., Nuha, A., & Aprimanto, B. (2020). Neraca Airtanah Cekungan Airtanah (CAT) Menoreh dan Wates Kabupaten Kulon Progo. *Geo Media: Majalah Ilmiah dan Informasi Kegeografian* 18, No. 2, 77-96.
- Huang, H.-C., & Tseng, Y.-S. (2002). Characteristics of soil liquefaction using H/V of microtremors in Yuan-Lin area, Taiwan. *Terrestrial Atmospheric and Oceanic Sciences* 13, No. 3, 325-338.
- Hwang, R. N., & Lysmer, J. (1981). Response of buried structures to traveling waves. *Journal of the Geotechnical Engineering Division* 107, No. 2, 183-200.
- Idriss, I. M., & Boulanger, R. W. (2008). *Soil Liquefaction During Earthquakes*. Oakland: Earthquake Engineering Research Institute.
- Jain, A., Satyendra, M., & Tshering, C. (2020). Liquefaction Mitigation Measures of Fine Sand Using Cement Grout Under Cyclic Loading. *ISSET J. Earthq. Tech.*, 87-101.
- Juang, C. H., Yang, S. H., Yuan, H., & Fang, S. Y. (2005). Liquefaction in the Chi-Chi earthquake-effect of fines and capping non-liquefiable layers. *Soils and foundations* 45, No. 6, 89-101.
- Khatimah, N. H., Rifa'i, A., & Ismanti, S. (2021). *Analisis Potensi Likuefaksi pada Bangunan Underpass Bandara YIA berdasarkan Simulasi Numeris*. Yogyakarta: Fakultas Teknik Universitas Gadjah Mada.
- Kirkwood, P., & Dashti, S. (2018). Considerations for the Mitigation of Earthquake-Induced Soil Liquefaction in Urban Environments. *Journal of Geotechnical and Geoenvironmental Engineering*, 1-15.
- Kiyota, T., Ikeda, T., Konagai, K., & Shiga, M. (2017). Geotechnical damage caused by the 2016 Kumamoto earthquake, Japan. *International Journal of Geoengineering Case Histories* 4, No. 2, 78-94.
- Koller, M. G., Chatelain, J.-L., Guillier, B., Duval, A.-M., Atakan, K., Lacave, C., & Bard, P. Y. (2004). *Guidelines for the implementation of the H/V spectral ratio technique on*



- ambient vibrations measurements, processing and interpretation*. Vancouver: In Proceedings of the 13th world conference in earthquake engineering.
- Kramer, S. L. (1996). *Geotechnical Earthquake Engineering*. India: Pearson Education India.
- Lee, C. J., Wei, Y. C., Chuang, W. Y., Hung, W. Y., Wu, W. L., & Ho, T. Y. (2017). Uplift mechanism of rectangular tunnel in liquefied soils. *Geotechnical hazards from large earthquakes and heavy rainfalls*, 61-74.
- Litasari, U. C., & Munibah, K. (2022). Mapping The Landslide Risk in Kulon Progo, Indonesia Using GeoTOPSIS. In *IOP Conference Series: Earth and Environmental Science*, Vol. 1109, No. 1 (hal. p. 012011). IOP Publishing.
- Lukyani, L. (2021, September 29). *Kompas*. Diambil kembali dari Sains/Fenomena: <https://www.kompas.com/sains>
- Mitchell, J., Masood, T., Kayen, R., & Seed, R. (1990). *Soil Conditions and Earthquake Hazard Mitigation in The Marina District of San Francisco*. Berkeley, California: Earthquake Engineering Research Center Report No. UCB/EERC-90/08.
- Molnar, S., Sirohey, A., Assaf, J., Bard, P. Y., Castellaro, S., Cornou, C., . . . Matsushima, S. (2022). A review of the microtremor horizontal-to-vertical spectral ratio (MHVSR) method. *Journal of Seismology*, 653-685.
- Mufti, N. D., Rifa'i, A., & Faris, F. (2021). *Stabilitas Bangunan Underpass Yogyakarta International Airport Ditinjau secara Analitis dan Numeris 3D*. Yogyakarta: Fakultas Teknik Universitas Gadjah Mada.
- Nakamura, Y. (2000). Clear identification of fundamental idea of Nakamura's technique and its applications. In *Proceedings of the 12th world conference on earthquake engineering* (pp. 1-8). New Zealand Society for Earthquake Engineering.
- Nakamura, Y. (2008). On The H/V Spectrum. In *Proceedings of the 14th World Conference on Earthquake Engineering* (pp. 1-10). Beijing, China: WCEE.
- Nishimura, I., Noguchi, T., Ono, Y., & Kohno, M. (2022). Subsurface Structures Based on Microtremor Observations in Landslide Area of Tandikat, West Sumatra, Indonesia. *International Journal of GEOMATE*, 57-62.
- Noguchi, T., Nishimura, I., & Kagawa, T. (2021). Estimation of Subsurface Structure of Landslide Area Based on Microtremor Observation in The Hojoshima, Nawashiro and Amedaki Area, Tottori, Japan. *International Journal of GEOMATE*, 48-53.
- Noguchi, T., Nishimura, I., Ono, Y., & Kohno, M. (2021). Estimation of Subsurface Structure Based on Microtremor and Seismic Observations in Area Damaged by 2018 Hokkaido Eastern Iwate Earthquake, Hokkaido, Japan. *International Journal of GEOMATE*, 8-15.
- Nugraha, A. D., Shiddiqi, H. A., Widiyantoro, S., Thurber, C. H., Pesicek, J. D., Zhang, H., . . . Irsyam, M. (2018). Hypocenter Relocation along the Sunda Arc in Indonesia, Using a 3D Seismic-Velocity Model. *Seismological Research Letters* 89, No. 2A, 603-612.
- NZGS Inc. (2021). *National Design Guidelines for Ground Improvement of Soils Prone to Liquefaction*. New Zealand: Ministry of Business, Innovation & Employment.
- Obrzud, R. F., & Truty, A. (2018). *The Hardening Soil Model-A Practical Guidebook*. Switzerland: Zaca Service Ltd.
- Orense, R. (2008). Liquefaction Remediation by Compaction Grouting. *New Zealand Society for Earthquake Engineering Annual Technical Conference, Wairakei* (pp. 1-8). NZSEE.
- OSMF. (2023, 11). *OpenStreetMap*. Retrieved from OpenStreetMap: <https://www.openstreetmap.org>
- Pawirodikromo, W. (2022). Ground Motions, Site Amplification and Building Damage at Near Source of the 2006 Yogyakarta, Indonesia Earthquake. *Geotechnical and Geological Engineering*, 5781-5798.



- Prasetya, A. R. (2023). *Laporan Kegiatan Magang pada Underpass Yogyakarta International Airport Kab. Kulon Progo - Prov. D.I. Yogyakarta*. Yogyakarta: Program Studi Magister Teknik Pengelolaan Bencana Alam, Departemen Teknik Sipil dan Lingkungan, Fakultas Teknik Universitas Gadjah Mada.
- Prasetya, A. R., Faris, F., & Rahardjo, A. P. (2024). Seismic Vulnerability Assessment Using The HVSR Method At Yogyakarta International Airport Underpass, Indonesia. *Accepted in International Journal of GEOMATE*, 1-9.
- PT. Indonesia Geospasial Tech. (2021, January). *Indonesia Geospasial*. Diambil kembali dari Download SHP Kemiringan Lereng Seluruh Indonesia: <https://www.indonesia-geospasial.com>
- PT. Soilens. (2019). *Laporan Akhir Penyelidikan Tanah untuk Proyek Pembangunan Jalan Underpass Bandara Internasional Yogyakarta di Kulon Progo, Jawa Tengah Indonesia*. Yogyakarta: WIKA - MCM KSO.
- Pusat Litbang Jalan dan Jembatan. (2015). *Penentuan spektrum respons desain di permukaan tanah untuk jembatan*. Jakarta: Kementerian Pekerjaan Umum dan Perumahan Rakyat.
- Rahardjo, W., Sukandarrumidi, & Rosidi, H. (2012). *Peta Geologi Lembar Yogyakarta*. Bandung: Direktorat Geologi.
- Rahman, M. A., Fathani, T. F., Rifa'i, A., & Hidayat, M. S. (2020). Analisis Tingkat Potensi Likuifaksi Di Kawasan Underpass Yogyakarta International Airport. *Jurnal Rekayasa Sipil* 16 No. 2, 91-104.
- Ramadhan, M., Priyobudi, Imananta, R. T., Muzli, Supendi, P., Perdana, Y. H., . . . Setyah. (2021). *Katalog Gempabumi Indonesia: Relokasi Hiposenter dan Implikasi Tektonik*. Jakarta Pusat: Bidang Informasi Gempabumi dan Peringatan Dini Tsunami, Pusat Gempabumi dan Tsunami, Badan Meteorologi Klimatologi dan Geofisika.
- Rosyidi, S. A. (2020). *Analisis Potensi Likuefaksi Tanah Berbasis Teknik Gelombang Seismik*. Yogyakarta: The Phinisi Press Yogyakarta.
- Sayehvand, S., & Kalantari, B. (2012). Use of Grouting Method to Improve Soil Stability Against Liquefaction-A Review. *Electronic Journal of Geotechnical Engineering*, 1559-1566.
- SESAME. (2004). *Guidelines for the implementation of the H/V spectral ratio technique on ambient vibrations measurements processing and interpretation*. Project No. EVG1-CT-200-00026: SESAME European Research Project.
- Sridharan, A., & Gopalan, S. (2020). Predictive analysis of co-seismic rock fall hazard in Hualien County Taiwan. *Machine Learning and Information Processing* (hal. 343-353). Singapore: Springer.
- Supriyadi, Khumaedi, Sugiyanto, Fadilah, A., & Muttaqin, W. (2022). Study of The Subsurface Structure Based on Microseismic Data in The Heritage Area of Kota Lama Semarang, Indonesia. *International Journal of GEOMATE*, 211-219.
- Terzaghi, K. (1943). *Theoretical Soil Mechanics*. New York: John & Wiley Sons, Inc.
- Tim Fakultas Teknik Geologi UGM. (2016). *Penyusunan Peta Geometri Cekungan Airtanah dan Peta zona konservasi airtanah di Kabupaten Kulon Progo*. Yogyakarta: Dinas Pekerjaan Umum dan Dinas Energi Sumber Daya Mineral Provinsi DI Yogyakarta.
- Tim Pusat Studi Gempa Nasional. (2017). *Peta Sumber dan Bahaya Gempa Indonesia Tahun 2017*. Bandung: Pusat Penelitian dan Pengembangan Perumahan dan Perumahan dan Permukiman, Badan Penelitian dan Pengembangan, Kementerian Pekerjaan Umum dan Perumahan Rakyat.
- Tim Teknis. (2020). *Laporan Inspeksi Visual Hasil Penanganan Kebocoran pada Underpass Bandara New Yogyakarta International Airport (NYIA)*. Jakarta: Balai Jembatan



- Khusus dan Terowongan, Direktorat Jenderal Bina Marga, Kementerian Pekerjaan Umum dan Perumahan Rakyat.
- United States Geological Survey (USGS). (2023). *USGS*. Retrieved from Eartquake Hazard Program: <https://earthquake.usgs.gov/earthquakes/map>
- Watanabe, K., Sawada, R., & Koseki, J. (2016). Uplift mechanism of open-cut tunnel in liquefied ground and simplified method to evaluate the stability against uplifting. *Soils and Foundations* 56, No. 3, 412-426.
- Wathelet, M. (2008). An Improved Neighborhood Algorithm: Parameter Conditions and Dynamic Scaling. *Geophysical Research Letters*, 1-5.
- Wathelet, M., Chatelain, J., Cornou, C., Di Giulio, G., Guillier, B., Ohrnberger, M., & Savvaidis, A. (2020). Geopsy: A User-Friendly Open-Source Tool Set for Ambient Vibration Processing. *Seismological Research Letters*, 1878-1889.
- Wibowo, N., Fathani, T., Pramumijoyo, S., & Marliyani, G. (2023). Microzonation of Seismic Parameters in Geological Formation Units Along the Opak River Using Microtremor Measurements. *International Journal of GEOMATE*, 208-219.
- Widodo, P., Wijaya, H. H., & Sunarto. (2011). Intensity, attenuation and building damage from the 27th May 2006 Yogyakarta earthquake. *WIT Transactions on the Built Environment* 119, 55-66.
- Wijayanto, Mardiatno, D., Nehren, U., & Marfai, M. (2022). Spatial Distribution of Vs30 Based on MASW and HVSR Inversion in Gunungkidul, Yogyakarta. *International Journal of GEOMATE*, 29-38.
- WIKA - MCM KSO. (2018). *Laporan Perencanaan Pembangunan Underpass Bandara New International Airport*. Semarang: Satuan Kerja Pelaksanaan Jalan Nasional Wilayah Provinsi Daerah Yogyakarta Balai Besar Pelaksanaan Jalan Nasional VII Direktorat Jenderal Bina Marga Kementerian PUPR.
- WIKA - MCM KSO. (2019). *Dokumentasi Pelaksanaan Konstruksi Pekerjaan Pembangunan Underpass Bandara*. Semarang: Satuan Kerja Pelaksanaan Jalan Nasional Wilayah Provinsi Daerah Yogyakarta Balai Besar Pelaksanaan Jalan Nasional VII Direktorat Jenderal Bina Marga Kementerian PUPR.
- Yang, J. (2004). Reappraisal of vertical motion effects on soil liquefaction. *Geotechnique* 54, No. 10, 671-676.
- Yang, J., & Sato, T. (2001). Analytical study of saturation effects on seismic vertical amplification of a soil layer. *Geotechnique* 51, No. 2, 161-165.
- Yasuda, S. (2007). Remediation methods against liquefaction which can be applied to existing structures. *Springer Netherlands*, pp. 385-406.
- Zamroni, A., Sugarbo, O., Trisnaning, P. T., & Prasetya, H. E. (2021). Seawater intrusion prone areas around Yogyakarta International Airport: a geological approach. In *IOP Conference Series: Earth and Environmental Science* (Vol. 782, No. 2) (hal. p. 022006). IOP Publishing.
- Zhang, X., Jiang, Y., Hirakawa, Y., Cai, Y., & Sugimoto, S. (2019). Correlation between seismic damages of Tawarayama tunnel and ground deformation under the 2016 Kumamoto earthquake. *Rock Mechanics and Rock Engineering* 52, 2401-2413.
- Zhao, M., Liu, G., Zhang, C., Guo, W., & Luo, Q. (2020). State-of-the-art of Colloidal Silica-based Soil Liquefaction Mitigation: An Emerging Technique for Ground Improvement. *Applied Sciences*, 2-31.