

Daftar Pustaka

- Abidin, H. (2000). *Penentuan Posisi dengan GPS dan Aplikasinya* (2nd ed.). Jakarta: PT Pradnya Paramita.
- Abidin, H., Andreas, H., Meilano, I., Gamal, M., Gumilar, I., dan Abdullah, C. (2009). Deformasi Koseismik dan Pascaseismik Gempa Yogyakarta 2006 dari Hasil Survei GPS. *Jurnal Geologi Indonesia*, 4(4), 275–284. <https://doi.org/10.1080/00033797900200221>.
- Abidin, H., Yolanda, O., Meilano, I., Suganda, O., Kusuma, M., Muhandi, D., Setyadji, B., Sukhyar, R., Kahar, J., dan Tanaka, T. (1998). Efek Bias Troposfer pada Penentuan Deformasi Gunung Guntur dengan Metode Survei GPS. *Proceeding ITB*, 30(1).
- Abidin, H. Z. (1997). *Geodesi Satelit* (1st ed., Vol. 81). Jakarta: PT Pradnya Paramita.
- Agnew, D. C. (2015). Earth Tides. in *Treatise on Geophysics* (2nd ed., pp. 151–178). La Jolla: Elsevier B.V. <https://doi.org/10.1016/B978-0-444-53802-4.00058-0>.
- Allmendinger, R. W., Reilinger, R., dan Loveless, J. (2007). Strain and Rotation Rate from GPS in Tibet, Anatolia, and the Altiplano. *Tectonics*, 26(TC3013), 1–18. <https://doi.org/10.1029/2006TC002030>.
- Altamimi, Z., Collilieux, X., Legrand, J., Garayt, B., dan Boucher, C. (2007). ITRF2005: a New Release of the International Terrestrial Reference Frame based on Time Series of Station Positions and Earth Orientation Parameters. *Journal of Geophysical Research: Solid Earth*, 112(9), 1–19. <https://doi.org/10.1029/2007JB004949>.
- Alzair, N. (2016). Pengembangan Metode Penajaman (Enhancement) Citra Digital Menggunakan Data Landsat 8 untuk Kajian Geologi Daerah Gunung Kidul Yogyakarta. *Tesis Magister Geografi*, Universitas Gadjah Mada.
- Andriyani, G., Kahar, S., Awaluddin, M., dan Meilano, I. (2011). Kajian Regangan Selat Bali Berdasarkan Data GNSS Kontinu Tahun 2009-2011, 1–12.
- Argus, D. F., Gordon, R. G., dan DeMets, C. (2011). Geologically Current Motion of 56 Plates Relative to the No-Net-Rotation Reference Frame. *Geochemistry, Geophysics, Geosystems*, 12(11). <https://doi.org/10.1029/2011GC003751>.

- Bakruddin, Utama, W., dan Warnana, D. (2016). Penggunaan Citra Satelit Landsat 8 untuk Analisis Patahan pada Lapangan Panas Bumi Arjuno Welirang Provinsi Jawa Timur. *Prosiding Seminar Nasional Aplikasi Teknologi Prasarana Wilayah IX (ATPW)* (pp. 37–44). Surabaya.
- Barman, P., Ray, J. D., Kumar, A., Chowdhury, J. D., dan Mahanta, K. (2016). Estimation of Present-day Inter-seismic Deformation in Kopili Fault Zone of North-East India using GPS Measurements. *Geomatics, Natural Hazards and Risk*, 7(2), 586–599. <https://doi.org/10.1080/19475705.2014.983187>.
- Bird, P. (2003). an Updated Digital Model of Plate Boundaries. *Geochemistry, Geophysics, Geosystems*, 4(3). <https://doi.org/10.1029/2001GC000252>.
- DeMets, C., Gordon, R. G., dan Argus, D. F. (2010). Geologically Current Plate Motions. *Geophysical Journal International*, 181(1), 1–80. <https://doi.org/10.1111/j.1365-246X.2009.04491.x>.
- Dizio, L. P. (2016). Elastic Block Modeling of Fault Slip Rates across Southern California. *Macalester Journal of Physics and Astronomy*, 4(1).
- Ekawati, S. (2015). Pengaruh Geometri Satelit dan Ionosfer dalam Kesalahan Penentuan Posisi GPS. *Berita Dirgantara*, 11(2), 59–65.
- Flower, C. M. R. (1996). *the Solid Earth: an Introduction to Global Geophysics*. Cambridge University Press (2nd ed., Vol. 6). United Kingdom: the Press Syndicate of the University of Cambridge. <https://doi.org/10.1029/90EO00309>.
- Goudarzi, M. A., Cocard, M., dan Santerre, R. (2015). GeoStrain: an Open Source Software for Calculating Crustal Strain Rates. *Computers and Geosciences*, 82, 1–12. <https://doi.org/10.1016/j.cageo.2015.05.007>.
- Gunawan, E., dan Widiyantoro, S. (2019). Active Tectonic Deformation in Java, Indonesia inferred from a GPS-Derived Strain Rate. *Journal of Geodynamics*, 123(October 2018), 49–54. <https://doi.org/10.1016/j.jog.2019.01.004>.
- Harini, R., Christanto, N., dan Marfai, M. (2014). *Kompetensi Dasar Olimpiade Sains Nasional Geografi*. Yogyakarta: Gadjah Mada University Press.
- Hendrayana, H., dan Vicente, V. A. de S. (2013). Cadangan Airtanah Berdasarkan Geometri dan Konfigurasi Sistem Akuifer Cekungan Airtanah Yogyakarta-Sleman. *Prosiding Seminar Nasional Kebumihan Ke-6* (pp. 11–12). Yogyakarta: Teknik Geologi Universitas Gadjah Mada.

- Ishchenko, M. (2018). Investigation of Deformations of the Earth Crust on the Territory of Ukraine Using a GNSS Observations. *Artificial Satellites*, 53(3), 117–126. <https://doi.org/10.2478/arsa-2018-0009>.
- Keller, E. A., dan Pinter, N. (2014). *Active Tectonics Earthquakes, Uplift, and Landscape. Environmental and Engineering Geoscience* (Vol. III). United States of America: Prentice-Hall, Inc. <https://doi.org/10.2113/gseegeosci.iii.3.463>.
- Kostyuk, A. D., Sycheva, N. A., Yunga, S. L., Bogomolov, L. M., dan Yagi, Y. (2010). Deformation of the Earth's Crust in the Northern Tien Shan According to the Earthquake Focal Data and Satellite Geodesy. *Physics of the Solid Earth*, 46(3), 230–243. <https://doi.org/10.1134/S1069351310030055>.
- Koulali, A., McClusky, S., Susilo, S., Leonard, Y., Cummins, P., Tregoning, P., Meilano, I., Efendi, J., dan Wijanarto, A. B. (2017). the Kinematics of Crustal Deformation in Java from GPS Observations: Implications for Fault Slip Partitioning. *Earth and Planetary Science Letters*, 458, 69–79. <https://doi.org/10.1016/j.epsl.2016.10.039>.
- Kuang, S., (1996). *Geodetic Network Analysis and Optimal Design: Concept and Applications*. Michigan: Ann Arbor Press, Inc.
- Kusky, T. (2008). *Earthquakes: Plate Tectonics and Earthquake Hazards. Infobase publishing* (Vol. 1). United States of America: Facts On File, Inc. <https://doi.org/10.1021/cg3016707>.
- Lay, T. (1995). Earthquake Kinematics and Dynamics. In *International Geophysics* (Vol. 58, pp. 357–396). Elsevier B.V. [https://doi.org/10.1016/S0074-6142\(05\)80010-5](https://doi.org/10.1016/S0074-6142(05)80010-5).
- Leick, A. (2004). *GPS Satellite Surveying* (3rd ed.). New York, USA: John Wiley dan Sons, Inc.
- Leick, A., Rapoport, L., dan Tatarnikov, D. (2015). *GPS Satellite Surveying* (4th ed.). United States of America: John Wiley dan Sons, Inc.
- Li, Y., Shan, X., Qu, C., dan Wang, Z. (2016). Fault Locking and Slip Rate Deficit of the Haiyuan-Liupanshan Fault Zone in the Northeastern Margion of the Tibetan Plateu. *Journal of Geodynamics*, 102, 47–57. <https://doi.org/10.1016/j.jog.2016.07.005>.
- Mccaffrey, R. (2002). Crustal Block Rotations and Plate Coupling. *Plate Boundary*

- Zones*, 30, 101–122. <https://doi.org/10.1029/gd030p0101>.
- McCaffrey, R. (2005). Block Kinematics of the Pacific-North America Plate Boundary in the Southwestern United States from Inversion of GPS, Seismological, and Geologic Data. *Journal of Geophysical Research*, 110(B07401), 1–27. <https://doi.org/10.1029/2004JB003307>.
- Meilano, I., Abidin, H. Z., Andreas, H., Gumilar, I., Sarsito, D., Hanifa, R., Rino, Harjono, H., Kato, T., Kimata, F., dan Fukuda, Y. (2012). Slip Rate Estimation of the Lembang Fault West Java from Geodetic Observation. *Journal of Disaster Research*, 7(1), 12–18. <https://doi.org/10.20965/jdr.2012.p0012>.
- Nurwidyanto, M., Brotopuspito, K., Waluyo, dan Sismanto. (2011). Study Pendahuluan Sesar Opak dengan Metode Gravity (Study Kasus Daerah Sekitar Kecamatan Pleret Bantul). *Berkala Fisika*, 14(1), 11–16.
- Ogata, Y. (2013). a Prospect of Earthquake Prediction Research. *Statistical Science*, 28(4), 521–541. <https://doi.org/10.1214/13-sts439>.
- Okada, Y. (1985). Surface Deformation due to Shear and Tensile Faults in a Half-Space. *Bulletin of the Seismological Society of America*, 75(4), 1135–1154. [https://doi.org/10.1016/0148-9062\(86\)90674-1](https://doi.org/10.1016/0148-9062(86)90674-1).
- Okada, Y. (1992). Internal Deformation due to Shear and Tensile Faults in a Half-Space. *Bulletin of the Seismological Society of America*, 82(2), 1018–1040.
- Pahlevi, A. M., Prijatna, K., Meilano, I., dan Sofian, I. (2016). Investigation of the Solid Earth Tide based on GPS Observation and Superconducting Gravimeter Data. *Geomatika*, 22(1), 29–36. <https://doi.org/http://dx.doi.org/10.24895/JIG.2016.22-1.488>.
- Paraditya, R., dan Purwanto, T. (2012). Pemanfaatan Citra Landsat 7 ETM+ untuk Pemetaan Potensi Mineralisasi Emas di Kawasan Gunung Dodo, Kabupaten Sumbawa, NTB. *Jurnal Bumi Indonesia*, 1(3), 122–129.
- Pearson, C. F., dan Snay, R. A. (2014). Strain Partitioning along the Western Margin of North America. *Journal of Structural Geology*. <https://doi.org/10.1016/j.jsg.2014.02.012>.
- Pollitz, F. F., Mccrory, P., Svarc, J., dan Murray, J. (2008). Dislocation Models of Interseismic Deformation in the Western United States, 113(B04413), 1–32. <https://doi.org/10.1029/2007JB005174>.

- Pradipta, D., Kuntjoro, W., dan Prijatna, K. (2012). Temporal Variation Analysis from Troposphere Delay using GPS (Study: Bandung, Indonesia). *Indonesian Journal of Geospatial*, 1(5), 54–70. Retrieved from www.google.com.
- Pratama, C., Widjajanti, N., Pinasti, A., Ummi, R. F., Parseno, Lestari, D., Sunantyo, A., Heilani, L., dan Ulinnuha, H. (under review). Opak Fault Zone in Yogyakarta, Indonesia Inferred from Present-day Crustal Deformation Based on Geodetic Data. *Journal of Applied Geology*.
- Purwanto, M. S., Bashri, A. Al, Harto, M. F. D., dan Syahqirawan, Y. (2017). Citra Satelit Landsat 8+ TIRS sebagai Tinjauan Awal dari Manifestasi Panas Bumi di Wilayah Gunung Argopuro. *Jurnal Geosaintek*, 3(1), 13–16.
- PuSGeN. (2017). *Peta Sumber dan Bahaya Gempa Indonesia Tahun 2017* (1st ed.). Bandung: Pusat Penelitian dan Pengembangan Perumahan dan Pemukiman, Badan Penelitian dan Pengembangan, Kementerian Pekerjaan Umum dan Perumahan rakyat.
- Qu, W., Lu, Z., Zhang, Q., Li, Z., Peng, J., Wang, Q., Drummond, J., dan Zhang, M. (2014). Kinematic Model of Crustal Deformation of Fenwei Basin China based on GPS Observations. *Journal of Geodynamics*, 75, 1–8. <https://doi.org/10.1016/j.jog.2014.01.001>.
- Ragan, D. M. (2009). *Structural Geology: an Introduction to Geometrical Techniques* (4th ed.). United States of America: Cambridge University Press.
- Rau, R.-J., Rateb, A., Ching, K.-E., Chen, C.-L., dan Kuo, C.-Y. (2017). Kinematics of the Tectonic Blocks and Active Faults at the Post-orogenic Stage: Northern Taiwan. *Journal of Asian Earth Sciences*, 149(January), 29–40. <https://doi.org/10.1016/j.jseaes.2017.07.055>.
- Reid, H. F. (1910). *the California Earthquake of April 18, 1906, Report of the State Earthquake Investigation Commission, the Mechanism of the Earthquake*. Nature (Vol. 2). Washington D.C. <https://doi.org/10.1038/084165a0>.
- Richards, J. A., dan Jia, X. (2006). *Remote Sensing Digital Image Analysis*. Germany: Springer-Verlag Berlin Heidelberg.
- Safitri, A. A., Meilano, I., Gunawan, E., Abidin, H., Efendi, J., dan Kriswati, E. (2018). Strain Variation along Cimandiri Fault, West Java based on Continuous and Campaign GPS Observation From 2006-2016. *41st HAGI Annual Convention and*

- Exhibition 2016*. IOP Conf. Series: Earth and Environmental Science 132.
<https://doi.org/10.1088/1755-1315/132/1/012027>.
- Sagiya, T., Miyazaki, S., dan Tada, T. (2000). Continuous GPS Array and Present-day Crustal Deformation of Japan. *Pure and Applied Geophysics*, 157, 2303–2322.
https://doi.org/https://doi.org/10.1007/978-3-0348-7695-7_26.
- Saputra, A., Gomez, C., Delikostidis, I., Zawar-Reza, P., Hadmoko, D., Sartohadi, J., dan Setiawan, M. (2018). Determining Earthquake Susceptible Areas Southeast of Yogyakarta, Indonesia-Outcrop Analysis from Structure from Motion (SfM) and Geographic Information System (GIS). *Geosciences*, 8(4), 132.
<https://doi.org/10.3390/geosciences8040132>.
- Savage, J. C., dan Burford, R. O. (1973). Geodetic Determination of Relative Plate Motion in Central California. *Journal of Geophysical Research*, 78(5), 832–845.
- Schowengerdt, R. A. (2010). *Remote Sensing: Models and Methods for Image Processing*. TU Delft, MSc Thesis (2nd ed.). United States of America: Academic Press.
- Setyawan, A. A. (2017). Evaluasi Survei GNSS pada Pemantauan Sesar OPAK Tahun 2013 s.d. 2016. *Tesis Magister Teknik Geomatika*, Universitas Gadjah Mada, Yogyakarta.
- Shen, Z., Wang, M., Zeng, Y., dan Wang, F. (2015). Optimal Interpolation of Spatially Discretized Geodetic Data. *Bulletin of the Seismological Society of America*, 105(4), 2117–2127. <https://doi.org/10.1785/0120140247>.
- Shodiq, A. (2016). Pemodelan dan Visualisasi Deformasi 3D Aspek Geometrik Candi Borobudur. *Tesis Magister Teknik Geomatika*, Universitas Gadjah Mada.
- Simons, W. J. F., Socquet, A., Vigny, C., Ambrosius, B. A. C., Abu, S. H., Promthong, C., Subarya, C., Sarsito, D. A., Matheussen, S., Morgan, P., dan Spakman, W. (2007). a Decade of GPS in Southeast Asia: Resolving Sundaland Motion and Boundaries. *Journal of Geophysical Research: Solid Earth*, 112(6), 1–20.
<https://doi.org/10.1029/2005JB003868>.
- Soebowo, E., Tohari, A., dan Sarah, D. (2007). Studi Potensi Likuifaksi di Daerah Zona Patahan OPAK Patalan-Bantul, Jogjakarta. *Proseding Seminar Geoteknologi Kontribusi Ilmu Kebumihan dalam Pembangunan Berkelanjutan* (pp. 57–65). Bandung.

- Soehaimi, A. (2008). Seismotektonik dan Potensi Kegempaan Wilayah Jawa. *Jurnal Geologi Indonesia*, 3(4), 227–240.
- Stanaway, R., Roberts, C., Blick, G., dan Crook, C. (2012). Four Dimensional Deformation Modelling, the Link Between International, Regional and Local Reference Frames. *FIG Working Week*. Rome, Italy.
- Starostenko, V., Gintov, O., Kutas, R., dan Pashkevich, I. (2010). Geodynamics of Lithosphere as One of the Crucial Factors of Mineral Deposits Formation of Ukraine. *Geodynamical Phenomena*, 32(4), 162–163.
- Sunantyo, T., Pramumijoyo, S., dan Husein, S. (2014). Pengukuran Jaring Pemantau Tahun 2013 dan Pemetaan Geologi di Kawasan Sekitar Sesar Opak, Provinsi DIY. *Annual Engineering Seminar* (pp. 41–50). Yogyakarta.
- Susilo, Meilano, I., Hasanuddin Z. Abidin, dan Benyamin Sapiie. (2015). a New Definition of Sunda Block Rotation Model. *Joint Convention Balikpapan 2015 HAGI-IAGI-IAFMI-IATMI*. Balikpapan.
- Tregoning, P., dan VanDam, T. (2005). Atmospheric Pressure Loading Corrections Applied to GPS Data at the Observation Level. *Geophysical Research Letters*, 32(L22310). <https://doi.org/10.1029/2005GL024104>.
- Tsuji, T., Yamamoto, K., Matsuoka, T., Yamada, Y., Onishi, K., Bahar, A., Meilano, I., dan Abidin, H. Z. (2009). Earthquake Fault of the 26 May 2006 Yogyakarta Earthquake Observed by SAR Interferometry. *Earth Planets Space*, 61. <https://doi.org/10.1186/bf03353189>.
- Ulinuha, H. (2015). Analisis Deformasi Aspek Geometrik Segmen Mentawai Akibat Gempa Tektonik 10 Juli 2013. *Tesis Magister Teknik Geomatika*, Universitas Gadjah Mada.
- USGS. (n.d.). the Band Designations for the Landsat Satellites.
- Wallace, L. M., Beavan, J., McCaffrey, R., dan Darby, D. (2004). Subduction Zone Coupling and Tectonic Block Rotations in the North Island, New Zealand. *Journal of Geophysical Research*, 109(B12406), 1–21. <https://doi.org/10.1029/2004JB003241>.
- Walter, T. R., Wang, R., Luehr, B. G., Wassermann, J., Behr, Y., Parolai, S., Anggraini, A., Gunther, E., Sobiesiak, M., Grosser, H., Wetzel, H., Milkereit, C., Brotopuspito, P., Harjadi, P., dan Zschau, J. (2008). the 26 May 2006 Magnitude

- 6.4 Yogyakarta Earthquake South of Mt. Merapi Volcano: Did Lahar Deposits Amplify Ground Shaking and thus Lead to the Disaster? *Geochemistry, Geophysics, Geosystems*, 9(5), 1–9. <https://doi.org/10.1029/2007GC001810>.
- Wibowo, S. 2016. Penentuan Metode Pemodelan Deformasi Komponen Sekular Wilayah Indonesia Berdasarkan Data Pengamatan Geodetik. *Tesis Magister Teknik Geodesi*, Institut Teknologi Bandung, Bandung.
- Widjajanti, N., Emalia, S. S., dan Parseno, P. (2018). GNSS Monitoring Network Optimization Case Study: Opak Fault Deformation, Yogyakarta. *JGISE: Journal of Geospatial Information Science and Engineering*, 1(1), 14–21. <https://doi.org/10.22146/jgise.38458>.
- Yong-Qi, C. (1983). *Analysis of Deformation Surveys-a Generalized Method*. Canada: University of New Brunswick.
- Zoback, M. D. (2007). *Reservoir Geomechanics* (1st ed.). United States of America: Cambridge University Press.