DAFTAR PUSTAKA

A. Putnam and J. W. Johson. (1947). *The Dissipation O F Wave Energy by Bottom Friction*. *1*.

Abu Bakar, A., Mardiatno, D., & Marfai, M. A. (2017). Study on potential tsunami by earthquake in subduction zone of Sulawesi Sea. *Arabian Journal of Geosciences*, *10*(24), 1–11. https://doi.org/10.1007/s12517-017-3286-4

Adyasari, D., Pratama, M. A., Teguh, N. A., Sabdaningsih, A., Kusumaningtyas, M. A., & Dimova, N. (2021). Anthropogenic impact on Indonesian coastal water and ecosystems: Current status and future opportunities. *Marine Pollution Bulletin*, *171*(July), 112689. https://doi.org/10.1016/j.marpolbul.2021.112689

Al-Faesly, T., Palermo, D., Nistor, I., & Cornett, A. (2012). Experimental modeling of extreme hydrodynamic forces on structural models. *International Journal of Protective Structures*, *3*(4), 477–506. https://doi.org/10.1260/2041-4196.3.4.477

Armanini, A., Larcher, M., & Odorizzi, M. (2011). Dynamic impact of a debris flow front against avertical wall. *International Conference on Debris-Flow Hazards Mitigation: Mechanics, Prediction, and Assessment, Proceedings*, 1041–1049. https://doi.org/10.4408/IJEGE.2011-03.B-113

Asakura, R., Iwase, K., Ikeya, T., Takao, M., Kaneto, T., Fujii, N., & Ohmori, M. (2003). *the Tsunami Wave Force Acting on Land Structures*. 1191–1202. https://doi.org/10.1142/9789812791306_0101

ASCE. (2022). Asce 7-22. In *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*.

Badan Nasional Penanggulangan Bencana. (2023). Risiko Bencana Indonesia “Memahami Risiko Sistemik di Indonesia.” In *Bnpb*. https://inarisk.bnpb.go.id/BUKU-RBI-2022/mobile/index.html#p=10

Benazir,Triatmadja, R., Yuwono, N., Nurhasanah, A., Kusnandi. (2020). Tsunami Force on Low Building and The Effect of Surrounding. *Proceedings of the 7th International Conference on Asian and Pacific Coasts, APAC 2013, Pp. 509–514, February 2015*. https://doi.org/https://doi.org/10.1007/978-981-15-0291-0_36

Benazir, & Rani Suryani, O. (2024). Assessing tsunami risk along the Aceh coast , Indonesia : a quantitative analysis of fault rupture potential and early warning system efficacy for predicting arrival time and flood extent. *Natural Hazards*, *120*(5), 4875–4900. https://doi.org/10.1007/s11069-024-06401-x

Bhatti, M. M., Marin, M., Zeeshan, A., & Abdelsalam, S. I. (2020). Editorial: Recent Trends in Computational Fluid Dynamics. *Frontiers in Physics*, *8*(October), 1–4. https://doi.org/10.3389/fphy.2020.593111

Boret, S. P., & Gerster, J. (2021). *Social lives of tsunami walls in Japan : Concrete culture , social innovation and coastal communities Social l ives of t sunami w alls in Japan : Concrete c ulture , s ocial i nnovation and c oastal c ommunities*. https://doi.org/10.1088/1755-1315/630/1/012029

Cannata, G., Tamburrino, M., Ferrari, S., Badas, M. G., & Querzoli, G. (2020). Numerical and experimental investigation of wave overtopping of barriers. *Water (Switzerland)*, *12*(2). https://doi.org/10.3390/w12020451

Carmo, J. S. A. do. (2020). Physical Modelling vs. Numerical Modelling: Complementarity and Learning. *Preprints.Org*, *July*. https://doi.org/10.20944/preprints202007.0753.v1

Chang, C. C., & Wu, Y. T. (2023). SPH modeling of dam-break bores on smooth and macro-roughness slopes. *Ocean Engineering*, *279*(April), 114484. https://doi.org/10.1016/j.oceaneng.2023.114484

Chanson, H. (2005). Applications of the Saint-Venant Equations and Method of Characteristics to the Dam Break Wave Problem. In *Report No. CH55/05: Vol. Dept. of C*.

Chanson, H. (2006). Tsunami surges on dry coastal plains: Application of dam break wave equations. *Coastal Engineering Journal*, *48*(4), 355–370.

Chen, L. (2005). The finite element method. *Mathematics in Science and Engineering*, *200*(C), 343–357. https://doi.org/10.1016/S0076-5392(05)80045-1

Chen, Z., Zong, Z., Liu, M. B., Zou, L., Li, H. T., & Shu, C. (2015). An SPH model for multiphase flows with complex interfaces and large density differences. *Journal of Computational Physics*, *283*, 169–188. https://doi.org/10.1016/j.jcp.2014.11.037

Chock, G., Carden, L., Robertson, I., Olsen, M., & Yu, G. (2013). Tohoku tsunami-induced building failure analysis with implications for U.S. tsunami and seismic design codes. *Earthquake Spectra*, *29*(SUPPL.1). https://doi.org/10.1193/1.4000113

Cox, D., Oshnack, M. E., & Agu, F. (2009). *Effectiveness of Small Onshore Seawall in Reducing Forces Induced by Tsunami Bore : Large Scale Experimental Study*. *4*(6).

Crespo, A. J. C., Domínguez, J. M., Rogers, B. D., Gómez-Gesteira, M., Longshaw, S., Canelas, R., Vacondio, R., Barreiro, A., & García-Feal, O. (2015). DualSPHysics: Open-source parallel CFD solver based on Smoothed Particle Hydrodynamics (SPH). *Computer Physics Communications*, *187*, 204–216. https://doi.org/10.1016/j.cpc.2014.10.004

Crespo, A. J. C., Gómez-Gesteira, M., & Dalrymple, R. A. (2007). 3D SPH simulation of large waves mitigation with a dike. *Journal of Hydraulic Research*, *45*(5), 631–642. https://doi.org/10.1080/00221686.2007.9521799

D. N. Moriasi, J. G. Arnold, M. W. Van Liew, R. L. Bingner, R. D. Harmel, & T. L. Veith. (2007). Model Evaluation Guidelines for Systematic Quantification of Accuracy in Watershed Simulations. *Transactions of the ASABE*, *50*(3), 885–900. https://doi.org/10.13031/2013.23153

Dalrymple, R. A., & Rogers, B. D. (2006). Numerical modeling of water waves with the SPH method. *Coastal Engineering*, *53*(2–3), 141–147. https://doi.org/10.1016/j.coastaleng.2005.10.004

Domínguez, J. M., Crespo, A. J. C., & Gómez-Gesteira, M. (2013). Optimization strategies for CPU and GPU implementations of a smoothed particle hydrodynamics method. *Computer Physics Communications*, *184*(3), 617–627. https://doi.org/10.1016/j.cpc.2012.10.015

Domínguez, J. M., Fourtakas, G., Altomare, C., Canelas, R. B., Tafuni, A., García-Feal, O., Martínez-Estévez, I., Mokos, A., Vacondio, R., Crespo, A. J. C., Rogers, B. D., Stansby, P. K., & Gómez-Gesteira, M. (2021). DualSPHysics: from fluid dynamics to multiphysics problems. *Computational Particle Mechanics*, *9*(5), 867–895. https://doi.org/10.1007/s40571-021-00404-2

Duró, G., Mariano, D. D., López, A., & Liscia, S. O. (2012). Physical Modeling and CFD Comparison: Case Study of a Hydro-Combined Power Station in Spillway Mode. *4th International Junior Researcher and Engineer Workshop on Hydraulic Structures*, 35–47. http://digitalcommons.usu.edu/ewhs%0Ahttp://digitalcommons.usu.edu/ewhs

Elchahal, G., Younes, R., & Lafon, P. (2008). The effects of reflection coefficient of the harbour sidewall on the performance of floating breakwaters. *Ocean Engineering*, *35*(11–12), 1102–1112. https://doi.org/10.1016/j.oceaneng.2008.04.015

Esteban, M., Thao, N. D., Takagi, H., Jayaratne, R., Mikami, T., & Shibayama, T. (2015). Stability of breakwaters against Tsunami attack. In *Handbook of Coastal Disaster Mitigation for Engineers and Planners*. Elsevier Inc. https://doi.org/10.1016/B978-0-12-801060-0.00015-0

Eymard, R., Normale, E., & Provence, U. De. (2000). Finite Volume Methods Thierry Gallou ~ t. *Computing*, *VII*(Part 3).

Farahmandpour, O., Marsono, A. K., Forouzani, P., Md. Tap, M., & Abu Bakar, S. (2020). Experimental simulation of tsunami surge and its interaction with coastal structure.

International Journal of Protective Structures, *11*(2), 258–280. https://doi.org/10.1177/2041419619874082

Federal Emergency Management Agency (FEMA). (2019). Guidelines for Design of Structures for Vertical Evacuation From Tsunamis 3rd Edition. *Jetty.Ecn.Purdue.Edu*, *August*, 176. ftp://jetty.ecn.purdue.edu/spujol/Andres/files/15-0021.pdf

FEMA (Federal Emergency Management Agency). (2011). Coastal Construction Manual. *Fema P-55*, *II*(August), 400.

Fisher, T. M. L., & Harris, R. A. (2016). Reconstruction of 1852 Banda Arc megathrust earthquake and tsunami. *Natural Hazards*, *83*(1), 667–689. https://doi.org/10.1007/s11069-016-2345-6

Foster, A. S. J., Rossetto, T., & Allsop, W. (2017). An experimentally validated approach for evaluating tsunami inundation forces on rectangular buildings. *Coastal Engineering*, *128*(July), 44–57. https://doi.org/10.1016/j.coastaleng.2017.07.006

Gill WN, Cole R, Davis EJ, Estrin J, Nunge RJ, & Littman H. (1970). Fluid Dynamics. In *Ind Eng Chem* (Vol. 62, Issue 4). Academic Press. https://doi.org/10.7551/mitpress/1763.003.0021

Glasbergen, T. (2018). *Characterization of incoming tsunamis for the design of coastal structures*. 1–95.

Gomez-Gesteira, M., Rogers, B. D., Crespo, A. J. C., Dalrymple, R. A., Narayanaswamy, M., & Dominguez, J. M. (2012). SPHysics - development of a free-surface fluid solver - Part 1: Theory and formulations. *Computers and Geosciences*, *48*, 289–299. https://doi.org/10.1016/j.cageo.2012.02.029

Guo, Z., Egbert, G., Dong, H., & Wei, W. (2020). Modular finite volume approach for 3D magnetotelluric modeling of the Earth medium with general anisotropy. *Physics of the Earth and Planetary Interiors*, *309*(July), 106585. https://doi.org/10.1016/j.pepi.2020.106585

Harish, S., Sriram, V., Schüttrumpf, H., & Sannasiraj, S. A. (2022). Tsunami-like Flow-Induced Forces on the Landward Structure behind a Vertical Seawall with and without Recurve Using OpenFOAM. *Water (Switzerland)*, *14*(13). https://doi.org/10.3390/w14131986

Huang, J. X., Qu, K., Li, X. H., & Lan, G. Y. (2022). Performance Evaluation of Seawalls in Mitigating a Real-World Tsunami Wave Using a Nonhydrostatic Numerical Wave Model. *Journal of Marine Science and Engineering*, *10*(6). https://doi.org/10.3390/jmse10060796

Kats, A. J. (2010). Meshless Methode For COmputational Fluid Dyanamics. *Journal of Allergy* *and Clinical Immunology*, *130*(2), 556. http://dx.doi.org/10.1016/j.jaci.2012.05.050

Key, S. W., & Krieg, R. D. (1973). Comparison of Finite-Element and Finite-Difference Methods This work was supported by the United States Atomic Energy Commission. In *Numerical and Computer Methods in Structural Mechanics*. ACADEMIC PRESS, INC. https://doi.org/10.1016/b978-0-12-253250-4.50019-1

Kihara, N., Arikawa, T., Asai, T., Hasebe, M., Ikeya, T., Inoue, S., Kaida, H., Matsutomi, H., Nakano, Y., Okuda, Y., Okuno, S., Ooie, T., Shigihara, Y., Shoji, G., Tateno, T., Tsurudome, C., & Watanabe, M. (2021). A physical model of tsunami inundation and wave pressures for an idealized coastal industrial site. *Coastal Engineering*, *169*(July), 103970. https://doi.org/10.1016/j.coastaleng.2021.103970

Kihara, N., Niida, Y., Takabatake, D., Kaida, H., Shibayama, A., & Miyagawa, Y. (2015). Large-scale experiments on tsunami-induced pressure on a vertical tide wall. *Coastal Engineering*, *99*, 46–63. https://doi.org/10.1016/j.coastaleng.2015.02.009

Koraim, A. S., Heikal, E. M., & Abo Zaid, A. A. (2014). Hydrodynamic characteristics of porous seawall protected by submerged breakwater. *Applied Ocean Research*, *46*, 1–14. https://doi.org/10.1016/j.apor.2014.01.003

Latcharote, P., Supparasi, A., Hasekawa, N., Takagi, H., & Imamura, F. (2016). Effect of Breakwaters on Reduction of Fatality Ratio during the 2011 Great East Japan Earthquake and Tsunami. *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, *72*(2), I_1591-I_1596. https://doi.org/10.2208/kaigan.72.i_1591

Leimkuhler, B. J., Reich, S., & Skeel, R. D. (1996). *Integration Methods for Molecular Dynamics*. 161–185. https://doi.org/10.1007/978-1-4612-4066-2_10

Liu, M. B., & Liu, G. R. (2010). Smoothed particle hydrodynamics (SPH): An overview and recent developments. In *Archives of Computational Methods in Engineering* (Vol. 17, Issue 1). https://doi.org/10.1007/s11831-010-9040-7

Lo, E. Y. M., & Shao, S. (2002). Simulation of near-shore solitary wave mechanics by an incompressible SPH method. *Applied Ocean Research*, *24*(5), 275–286. https://doi.org/10.1016/S0141-1187(03)00002-6

Lüthi, C., Afrasiabi, M., & Bambach, M. (2023). An adaptive smoothed particle hydrodynamics (SPH) scheme for efficient melt pool simulations in additive manufacturing. *Computers and Mathematics with Applications*, *139*(October 2022), 7–27. https://doi.org/10.1016/j.camwa.2023.03.003

Madsen, P. A., Fuhrman, D. R., & Schäffer, H. A. (2008). On the solitary wave paradigm for tsunamis. *Journal of Geophysical Research: Oceans*, *113*(12). https://doi.org/10.1029/2008JC004932

Mallinson, G. D., & Norris, S. E. (2010). Fundamentals of computational fluid dynamics. *Mathematical Modeling of Food Processing*, 125–179. https://doi.org/10.1201/9781420053548-8

Marquis, O., Tremblay, B., Lemieux, J. F., & Islam, M. (2024). Smoothed particle hydrodynamics implementation of the standard viscous–plastic sea-ice model and validation in simple idealized experiments. *Cryosphere*, *18*(3), 1013–1032. https://doi.org/10.5194/tc-18-1013-2024

McCaffrey, R. (2009). The tectonic framework of the sumatran subduction zone. *Annual Review of Earth and Planetary Sciences*, *37*, 345–366. https://doi.org/10.1146/annurev.earth.031208.100212

Mimura, N., Yasuhara, K., Kawagoe, S., Yokoki, H., & Kazama, S. (2011). Damage from the Great East Japan Earthquake and Tsunami - A quick report. *Mitigation and Adaptation Strategies for Global Change*, *16*(7), 803–818. https://doi.org/10.1007/s11027-011-9297-7

Monaghan, J. J. (1989). On the problem of penetration in particle methods. *Journal of Computational Physics*, *82*(1), 1–15. https://doi.org/10.1016/0021-9991(89)90032-6

Monaghan, J. J. (1992). Smoothed particle hydrodynamics. *Annual Review of Astronomy and Astrophysics*, *30*(1), 543–574. https://doi.org/10.1146/annurev.aa.30.090192.002551

Monaghan, J. J. (2005). Smoothed particle hydrodynamics. *Reports on Progress in Physics*, *68*(8), 1703–1759. https://doi.org/10.1088/0034-4885/68/8/R01

Munir, A. S., Sulistianto, B., Simangunsong, G. M., & Widodo, N. P. (2017). An physical modelling to validate numerical modelling on rock block displacement. *4th ISRM Young Scholars Symposium on Rock Mechanics, YSS 2017*, *2017-May*(May), 212–215.

Nandasena, N. A. K., Sasaki, Y., & Tanaka, N. (2012). Modeling field observations of the 2011 Great East Japan tsunami: Efficacy of artificial and natural structures on tsunami mitigation. *Coastal Engineering*, *67*, 1–13. https://doi.org/10.1016/j.coastaleng.2012.03.009

Nayak, S., Reddy, M. H. O., Madhavi, R., & Dutta, S. C. (2014). Assessing tsunami vulnerability of structures designed for seismic loading. *International Journal of Disaster Risk Reduction*, *7*, 28–38. https://doi.org/10.1016/j.ijdrr.2013.12.001

Nicholls, R. J. (2011). Planning for the impacts of sea level rise. *Oceanography*, *24*(2), 144–

157. https://doi.org/10.5670/oceanog.2011.34

Nouri, Y., Nistor, I., Palermo, D., & Cornett, A. (2010). Experimental investigation of tsunami impact on free standing structures. *Coastal Engineering Journal*, *52*(1), 43–70. https://doi.org/10.1142/S0578563410002117

Nwogwu, N. A. (2023). The Effect of Grid Resolution on Hydrodynamic Modeling of Biscayne Bay by. *OCEANS 2023 - MTS/IEEE U.S. Gulf Coast*.

Pfister, M., & Chanson, H. (2014). Two-phase air-water flows: Scale effects in physical modeling. *Journal of Hydrodynamics*, *26*(2), 291–298. https://doi.org/10.1016/S1001-6058(14)60032-9

Prabu, P., Murty Bhallamudi, S., Chaudhuri, A., & Sannasiraj, S. A. (2019). Numerical investigations for mitigation of tsunami wave impact on onshore buildings using sea dikes. *Ocean Engineering*, *187*(February), 106159. https://doi.org/10.1016/j.oceaneng.2019.106159

Proust, S., Bousmar, D., Rivière, N., Paquier, A., & Zech, Y. (2010). Energy losses in compound open channels. *Advances in Water Resources*, *33*(1), 1–16. https://doi.org/10.1016/j.advwatres.2009.10.003

Raby, A., Macabuag, J., Pomonis, A., Wilkinson, S., & Rossetto, T. (2015). Implications of the 2011 Great East Japan Tsunami on sea defence design. *International Journal of Disaster Risk Reduction*, *14*, 332–346. https://doi.org/10.1016/j.ijdrr.2015.08.009

Ramsden. (1993). *Tsunami: Forces on a vertical wall caused by long waves, bores, and surges on a dry bed*.

Röbke, B. R., & Vött, A. (2017). The tsunami phenomenon. *Progress in Oceanography*, *159*(September), 296–322. https://doi.org/10.1016/j.pocean.2017.09.003

Rudiarto, I., Handayani, W., & Setyono, J. S. (2018). A regional perspective on urbanization and climate-related disasters in the northern coastal region of central Java, Indonesia. *Land*, *7*(1). https://doi.org/10.3390/land7010034

Shafiei, S., Melville, B. W., & Shamseldin, A. Y. (2016). Experimental investigation of tsunami bore impact force and pressure on a square prism. *Coastal Engineering*, *110*, 1–16. https://doi.org/10.1016/j.coastaleng.2015.12.006

Shamim, S., Khan, P. K., & Mohanty, S. P. (2019). Stress reconstruction and lithosphere dynamics along the Sumatra subduction margin. *Journal of Asian Earth Sciences*, *170*(January 2018), 174–187. https://doi.org/10.1016/j.jseaes.2018.11.008

Siagian, T. H., Purhadi, P., Suhartono, S., & Ritonga, H. (2014). *Social vulnerability to natural* *hazards in Indonesia : driving factors and policy implications*. 1603–1617. https://doi.org/10.1007/s11069-013-0888-3

Sigalotti, L. D. G., Klapp, J., & Gesteira, M. G. (2021). The Mathematics of Smoothed Particle Hydrodynamics (SPH) Consistency. *Frontiers in Applied Mathematics and Statistics*, *7*(December), 1–16. https://doi.org/10.3389/fams.2021.797455

Strusińska-Correia, A. (2017). Tsunami mitigation in Japan after the 2011 Tōhoku Tsunami. In *International Journal of Disaster Risk Reduction* (Vol. 22, pp. 397–411). https://doi.org/10.1016/j.ijdrr.2017.02.001

Sugawara, D. (2021). Numerical modeling of tsunami: advances and future challenges after the 2011 Tohoku earthquake and tsunami. *Earth-Science Reviews*, *214*(December 2020), 103498. https://doi.org/10.1016/j.earscirev.2020.103498

Sugiarti, A. S., Meilianda, E., & Fatimah, E. (2021). An overview of physical and social vulnerability of high-risk coastal area after 14 years tsunami – a case study of Banda Aceh. *IOP Conference Series: Earth and Environmental Science*, *630*(1). https://doi.org/10.1088/1755-1315/630/1/012007

Syamsidik, Benazir, Luthfi, M., Suppasri, A., & Comfort, L. K. (2020). The 22 December 2018 Mount Anak Krakatau volcanogenic tsunami on Sunda Strait coasts, Indonesia: Tsunami and damage characteristics. *Natural Hazards and Earth System Sciences*, *20*(2), 549–565. https://doi.org/10.5194/nhess-20-549-2020

Syamsidik, Benazir, Umar, M., Margaglio, G., & Fitrayansyah, A. (2019). Post-tsunami survey of the 28 September 2018 tsunami near Palu Bay in Central Sulawesi, Indonesia: Impacts and challenges to coastal communities. *International Journal of Disaster Risk Reduction*, *38*(June), 101229. https://doi.org/10.1016/j.ijdrr.2019.101229

Syamsidik, Nugroho, A., Oktari, R. S., & Fahmi, M. (2019). Aceh Pasca Lima Belas Tahun Tsunami. *Universitas Nusantara PGRI Kediri*, *01*, 1–7.

Takagi, H., Tomiyasu, R., Oyake, T., Araki, T., Mori, K., Matsubara, Y., Ninomiya, Y., & Takata, Y. (2020). Tsunami intrusion through port breakwaters enclosed with self-elevating seawalls. *Ocean Engineering*, *199*(February), 107028. https://doi.org/10.1016/j.oceaneng.2020.107028

Tanasiva, Muryani, C., & Wijiyanti, P. (2021). Tsunami Vulnerability Assessment and Its Implications for Disaster Risk Management in the coastal area of Purworejo Regency. *IOP Conference Series: Earth and Environmental Science*, *884*(1). https://doi.org/10.1088/1755-1315/884/1/012012

Thomas, S., & Cox, D. (2012). Influence of Finite-Length Seawalls for Tsunami Loading on Coastal Structures. *Journal of Waterway, Port, Coastal, and Ocean Engineering*, *138*(3), 203–214. https://doi.org/10.1061/(asce)ww.1943-5460.0000125

Tomita, T., Yeom, G.-S., Ayugai, M., & Niwa, T. (2012). Breakwater Effects on Tsunami Inundation Reduction in the 2011 off the Pacific Coast of Tohoku Earthquake. *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, *68*(2), I_156-I_160. https://doi.org/10.2208/kaigan.68.i_156

Triatmadja, R. (2016). *Model Matematik Teknik Pantai* (Issue May). https://www.researchgate.net/profile/Radianta_Triatmadja/publication/302050857_Model_Matematik_Teknik_Pantai/links/5730548a08aeb1c73d144ab8/Model-Matematik-Teknik-Pantai.pdf

Triatmadja, R., & Benazir. (2014). Simulation of tsunami force on rows of buildings in Aceh region after tsunami disaster in 2004. *Science of Tsunami Hazards*, *33*(3), 156–169.

Triatmadja, R., Benazir, Tahalele, M., & Kuswandi, Pratomo, A.N.R., (2025). *Impact Of Tsunamis on Buildings in Array Layouts as Macro Roughness : lessons from the 2018 Anak Krakatau event through DualSPHysics modeling*. *2*.

Triatmadja, R., & Nurhasanah, A. (2012). Tsunami Force on Buildings With Openings and Protection. *Journal of Earthquake and Tsunami*, *6*(4), 1–17. https://doi.org/10.1142/S1793431112500248

Triatmadja, R., Rana, A. S. W., & Benazir. (2024). The Effectiveness of Tsunami Walls in Mitigating Tsunami Impact. *The 16th Aceh International Workshop on Sustainable Disaster Recovery (AIWEST-DR).*

Usman, A., Rafiq, M., Saeed, M., Nauman, A., Almqvist, A., & Liwicki, M. (2021). Machine Learning Computational Fluid Dynamics. *33rd Workshop of the Swedish Artificial Intelligence Society, SAIS 2021*. https://doi.org/10.1109/SAIS53221.2021.9483997

Wei, Z., & Dalrymple, R. A. (2016). Numerical Study on Mitigating Tsunami Force on Bridges By An SPH Model. *Journal of Ocean Engineering and Marine Energy*, *2*(3), 365–380. https://doi.org/10.1007/s40722-016-0054-6

Wu, T. R., Vuong, T. H. N., Lin, J. W., Chu, C. R., & Wang, C. Y. (2018). Three-Dimensional Numerical Study on the Interaction between Dam-Break Wave and Cylinder Array. *Journal of Earthquake and Tsunami*, *12*(2), 1–35. https://doi.org/10.1142/S1793431118400079

Wüthrich, D., Pfister, M., Nistor, I., & Schleiss, A. J. (2018). Experimental Study of Tsunami-

Like Waves Generated with a Vertical Release Technique on Dry and Wet Beds. *Journal of Waterway, Port, Coastal, and Ocean Engineering*, *144*(4), 1–20. https://doi.org/10.1061/(asce)ww.1943-5460.0000447

Xu, Z., Melville, B., Whittaker, C., Nandasena, N. A. K., & Shamseldin, A. (2021). Mitigation of Tsunami Bore Impact on A Vertical Wall Behind A Barrier. *Coastal Engineering*, *164*(December 2020), 103833. https://doi.org/10.1016/j.coastaleng.2020.103833

Yang, W., Wen, Z., Li, F., & Li, Q. (2018). Study on Tsunami Force Mitigation of The Rear House Protected By The Front House. *Ocean Engineering*, *159*(October 2017), 268–279. https://doi.org/10.1016/j.oceaneng.2018.04.034

Yasuhara, K., Kawagoe, S., & Kazama, S. (2011). *Damage from the Great East Japan Earthquake and Tsunami - A quick report Damage from the Great East Japan Earthquake and Tsunami - A quick report*. *April 2014*. https://doi.org/10.1007/s11027-011-9297-7

Zhang, Y., Zhu, W., Xu, Q., Kong, D., & Dong, X. (2024). Hydrodynamic Performance Of A Pile-Supportedoscillating Water Column Breakwater In Front Of Apartially Reflecting Seawall. *Physics of Fluids*, *36*. https://doi.org/10.1063/5.0219892

Zhang, Z., Zhang, W., Zhai, Z. J., Chen, Q. Y., Zhai, Z. J., & Chen, Q. Y. (2011). Evaluation of Various Turbulence Models in Predicting Airflow and Turbulence in Enclosed Environments by CFD : Part 2 — Comparison with Experimental Data from Literature Evaluation of Various Turbulence Models in Predicting Airflow and Turbulence in Enclo. *HVAC&R Research*, *9669*(February 2016), 37–41.

Zhao, E., Qu, K., & Mu, L. (2019). Numerical Study of Morphological Response of The Sandy Bed After Tsunami-Like Wave Overtopping an Impermeable Seawall. *Ocean Engineering*, *186*(May). https://doi.org/10.1016/j.oceaneng.2019.05.058

Zuliansah, A. B. R., Windujati, U., Rasyif, T. M., Mahlil, T., & Januriyadi, N. F. (2023). Performance Evaluation of DualSPHysics and COMCOT Programs through Numerical Testing for Simulating Tsunami Propagation and Overtopping on Seawalls. *E3S Web of Conferences*, *447*. https://doi.org/10.1051/e3sconf/202344701014