

Dr. Tomoya Shibayama is a Professor of Coastal Engineering at Department of Civil and Environmental Engineering, Waseda University in Tokyo, Japan. He is one of the top leaders of tsunami and storm surge disasters and their mitigation studies in Japan. He uses hydraulic laboratory experiments, field surveys and numerical simulations for the study. He served as team leaders of survey teams for all major tsunami and storm surge events in these fifteen years. He is the winner of 2019 Hamaguchi International Award for Enhancement of Tsunami/Coastal Disaster Resilience.

May 2022

## CURRICULUM VITAE

### 1. PERSONAL INFORMATION:

Name: Tomoya Shibayama

Nationality: Japanese

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### 2. ACADEMIC DEGREES

DEGREES	UNIVERSITY	COUNTRY	YEAR
Dr. Eng., Coastal Engineering and Hydraulics in Civil Engineering,	University of Tokyo	Japan	1985
M.E., Civil Engineering,	University of Tokyo	Japan	1979
B.E., Civil Engineering	University of Tokyo	Japan	1977

### 3. ACADEMIC EXPERIENCE

April 2009 – present: Professor, Department of Civil and Environmental Engineering, Waseda University. Research interests and teaching subjects include Tsunami and Storm Surge Disaster, Coastal and Ocean Engineering.

August 1997 – March 2009: Professor, Department of Civil Engineering, Yokohama National University.

April 1987 - July 1997: Associate Professor, Department of Civil Engineering, Yokohama National University.

August 1990 - August 1991: Associate Professor, Division of Water Resources Engineering, Asian Institute of Technology seconded by the Japanese Government.

March 1986 - March 1987: Associate Professor, Department of Civil Engineering, University of Tokyo.

May 1985 - February 1986: Assistant Professor, Department of Civil Engineering, University of Tokyo.

April 1981 - April 1985: Research Associate, Department of Civil Engineering, University of Tokyo.

#### **4. Major Research Field**

Coastal Engineering, Tsunami and Storm Surge, Coastal Disaster Preventions, Infrastructure Management, Sociology of Construction

#### **5. Present Positions:**

Professor of Civil and Environmental Engineering, Faculty of Science and Engineering, Waseda University

Director, Research Institute for Future Sustainable Society, Faculty of Science and Engineering, Waseda University

Director, Entrepreneurship Center, Waseda University

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Professor Emeritus at Yokohama National University

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#### **Professional Society: (Present Positions)**

President, Japan Association of Coastal Zone Studies

Advisor to Ocean Engineering Committee, Japan Society of Civil Engineers

Advisor to Coastal Engineering Committee, Japan Society of Civil Engineers

Formerly, he was the Editor in Chief, Coastal Engineering Journal (CEJ) published from World Scientific and Japan Society of Civil Engineers form 2004 to 2008.

Formerly, he was the President, Japan Federation of Ocean Engineering Societies

#### **Engineering Licenses:**

Professional Engineer (PE) in Construction, Japan

Executive Professional Civil Engineer, Japan Society of Civil Engineering (JSCE)

#### **6. Academic Award**

2019 Hamaguchi International Award For Enhancement of Tsunami/Coastal Disaster Resilience.

## **7. Recent Funding as a Principal Investigator**

JSPS KAKENHI Grant Number JP20KK0107, 2021-2026, 18,720,000 JPYen, "Joint Research on Coastal Disasters in Canadian Arctic Ocean Coast "

Japan Science and Technology Agency (JST) as part of the Belmont Forum, Grant Number JPMJBF2005, 2020-2023, 27,000,000 JPYen, "Re-Energize DR3, Re-Energize Governance of Disaster Risk Reduction and Resilience for Sustainable Development "

J-RAPID, Urgent Collaborative Research/Survey Program, JST, 2019-2020, 4,950,000 JPYen, "Survey of Tsunami Disaster and Response of Residents in the Sunda Strait Tsunami in Indonesia"

The Strategic Research Foundation Grant-aided Project for Private Universities from Ministry of Education, Science and Culture, No.S1311028, 2013-2018, 125,000,000 JP Yen, "Creation of New International Research Platform for Natural Disaster Reduction".

Grant-in-Aid for Scientific Research (B) No.22404011, Japan Society of Promotion of Science, 2010-2015, 16,770,000 Jp yen, "Survey of coastal disaster vulnerability in Asia and Africa."

Waseda University Research Initiative Grant, 2011-2016, 24,000,000 Jp Yen, "Research on Reconstruction from the Great East Japan Earthquake "

## **8. Graduate Students Supervision**

28 doctoral student supervisions as a principal academic supervisor

124 Master student supervisions as a principal academic supervisor

## **9. MOOC: Massive Open Online Course (Edx)**

"Tsunamis and Storm Surges: Introduction to Coastal Disasters" (Jan. 18, 2016 ----present)

<https://www.edx.org/course/tsunamis-storm-surges-introduction-wasedax-cosdis101x>

Instructor: Tomoya Shibayama

## **10. Scientific Publications in English:**

### **Books**

1. Shibayama, T., Coastal Processes—Concepts of Coastal Engineering and Their Applications to Multifarious Environments, 2009, World Scientific, 215p.
2. Esteban, M., Takagi, H., Shibayama, T. (editors) (2015): Handbook of Coastal Disaster Mitigation for Engineers and Planners, Paperback ISBN: 9780128010600, eBook ISBN: 9780128012703, Elsevier, 788p.

## **Recent Scientific Journal Papers (in English) (after 2011)**

1. Takabatake, T., Han, D. C., Valdez, J. J., Inagaki, N., Mäll, M., Esteban, M., & Shibayama, T. (2022). Three-dimensional physical modeling of tsunamis generated by partially submerged landslides. *Journal of Geophysical Research: Oceans*, 127, e2021JC017826. [[doi.org/10.1029/2021JC017826](https://doi.org/10.1029/2021JC017826)]
2. Takabatake, T., Dawn Han Chenxi, Esteban, M., Shibayama, T. (2021) :Influence of road blockage on tsunami evacuation: A comparative study of three different coastal cities in Japan : *International Journal of Disaster Risk Reduction* [[doi.org/10.1016/j.ijdrr.2021.102684](https://doi.org/10.1016/j.ijdrr.2021.102684)]
3. Ishii, H., Takabatake, T., Esteban, M., Stolle, J., Shibayama, T. (2021) : Experimental and numerical investigation on tsunami run-up flow around coastal buildings : *Coastal Engineering Journal*, DOI. [[doi.org/10.1080/21664250.2021.1949920](https://doi.org/10.1080/21664250.2021.1949920)]
4. Esteban, M., Takabatake, T., Achiari, H., Mikami, T., Nakamura, R., Gelfi, M., Panalaran, S., Nishida, Y., Inagaki, N., Chadwick, C., Oizumi, K., & Shibayama, T. (2021) : Field Survey of Flank Collapse and Run-up Heights due to 2018 Anak Krakatau Tsunami, *Journal of Coastal and Hydraulic Structures*, 1, 1. [<https://doi.org/10.48438/jchs.2021.0001>]
5. Knüpfer, K., Mäll, M., Esteban, M., Shibayama, T. (2021) : Review of mixed-technology vehicle fleet evolution and representation in modelling studies: Policy contexts of Germany and Japan, *Energy Policy*, 156, 112287 [[doi.org/10.1016/j.enpol.2021.112287](https://doi.org/10.1016/j.enpol.2021.112287)]
6. Krautwald, C., Stolle, J., Robertson, I., Achiari, H., Mikami, T., Nakamura, R., Takabatake, T., Nishida, Y., Shibayama, T., Esteban, M., Goseberg, N., Nistor, I. (2021): Engineering Lessons from September 28, 2018 Indonesian Tsunami: Scouring Mechanisms and Effects on Infrastructure, *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 147(2). [[doi.org/10.1061/\(ASCE\)WW.1943-5460.0000620](https://doi.org/10.1061/(ASCE)WW.1943-5460.0000620)]
7. Soltanpour, M., Ranji, Z., Shibayama, T., Ghader, S. (2021): Tropical Cyclones in the Arabian Sea: overview and simulation of winds and storm-induced waves, *Nat Hazards* (2021). [[doi.org/10.1007/s11069-021-04702-z](https://doi.org/10.1007/s11069-021-04702-z)]
8. Kyaw, T.O., Esteban, M., Mäll, M., Shibayama, T. (2021): Extreme waves induced by cyclone Nargis at Myanmar coast: numerical modeling versus satellite observations, *Nat Hazards* (2021). [[doi.org/10.1007/s11069-021-04511-4](https://doi.org/10.1007/s11069-021-04511-4)]
9. Soltanpour, M., Hejazi, K., Jabbari, M., Shibayama, T., Nishizaki, S. & Takabatake, T. (2020): The mechanism of fluidization in mud beds under progressive waves, *Coastal Engineering Journal*, DOI. [[doi.org/10.1080/21664250.2020.1847401](https://doi.org/10.1080/21664250.2020.1847401)]
10. Inagaki, N., Shibayama, T., Esteban, M. & Takabatake, T. (2020): Effect of translate speed of typhoon on wind waves, *Natural Hazards*(2020). [[doi.org/10.1007/s11069-020-04339-4](https://doi.org/10.1007/s11069-020-04339-4)]
11. Imura, K., Shibayama, T., Takabatake, T. & Esteban, M. (2020): Experimental and numerical investigation of tsunami behavior around two upright sea dikes with different heights, *Coastal Engineering Journal*, DOI. [[doi.org/10.1080/21664250.2020.1826126](https://doi.org/10.1080/21664250.2020.1826126)]
12. Koyano, K., Takabatake, T., Esteban, M. & Shibayama, T. (2021): Influence of Edge Waves on Tsunami Characteristics along Kujukuri Beach, Japan, *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 147(1). [[doi.org/10.1061/\(ASCE\)WW.1943-5460.0000617](https://doi.org/10.1061/(ASCE)WW.1943-5460.0000617)]
13. Takabatake, T., Mäll, M., Chenxi, D., Inagaki, N., Kishizaki, D., Esteban, M. & Shibayama, T. (2020): Physical modeling of tsunamis generated by subaerial, partially submerged, and submarine landslides, *Coastal Engineering Journal*, 62(4), 582-601. [[doi.org/10.1080/21664250.2020.1824329](https://doi.org/10.1080/21664250.2020.1824329)]

14. Ohira, K., Takabatake, T., Esteban, M., Aranguiz, R., Mäll, M. & Shibayama, T. (2020): Numerical Analysis of Seismic Water Level Oscillations in Canals, *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 146(6), 04020042. [[doi: 10.1061/\(ASCE\)WW.1943-5460.0000602](https://doi.org/10.1061/(ASCE)WW.1943-5460.0000602)]
15. Takabatake, T. & Shibayama, T. (2020): Improving the Evacuation Plan of Coastal Communities using Tsunami Evacuation Simulations: Case Study from Tagajyo, Japan, *J-Sustain*. [[in print](#)]
16. Mäll, M., Nakamura, R., Suursaar, Ü. & Shibayama, T. (2020): Pseudo-climate modelling study on projected changes in extreme extratropical cyclones, storm waves and surges under CMIP5 multi-model ensemble: Baltic Sea perspective, *Natural Hazards*, 102, 67-99. [[doi:10.1007/s11069-020-03911-2](https://doi.org/10.1007/s11069-020-03911-2)]
17. Suzuki T., Tajima, Y., Watanabe, M., Tsuruta, N., Takagi, H., Takabatake, T., Suzuki, K., Shimozono, T., Shigihara, Y., Shibayama, T., Kawaguchi, S. & Arikawa, T. (2020): Post-event survey of locally concentrated disaster due to 2019 Typhoon Faxai along the western shore of Tokyo Bay, Japan, *Coastal Engineering Journal*, 62(2), 146-158. [[doi.org/10.1080/21664250.2020.1738620](https://doi.org/10.1080/21664250.2020.1738620)]
18. Tomii Y., Shibayama, T., Nishida, Y., Nakamura, R., Okumura, N., Yamaguchi, H., Tanokura, Y., Oshima, Y., Sugawara, N., Fujisawa, K., Wakita, T., Mikami, T., Takabatake, T. & Esteban, M. (2020): Estimation of volcanic ashfall deposit and removal works based on ash dispersion simulations, *Natural Hazards*, in print. [[doi:10.1007/s11069-020-04134-1](https://doi.org/10.1007/s11069-020-04134-1)]
19. Aránguiz, R., Esteban, M., Takagi, H., Mikami, T., Takabatake, T., Gómez, M., González, J., Shibayama, T., Okuwaki, R., Yagi, Y., Shimizu, K., Achiari, H., Stolle, J., Robertson, I., Ohira, K., Nakamura, R., Nishida, Y., Krautwald, C., Goseberg, N. & Nistor, L. (2020): The 2018 Sulawesi tsunami in Palu city as a result of several landslides and coseismic tsunamis, *Coastal Engineering Journal*, 62(4), 445-459. [[doi.org/10.1080/21664250.2020.1780719](https://doi.org/10.1080/21664250.2020.1780719)]
20. Lim, G., Jayaratne, R. & Shibayama, T. (2020): Suspended sand concentration models under breaking waves: Evaluation of new and existing formulations, *Marine Geology*, 426, 106197. [[doi.org/10.1016/j.margeo.2020.106197](https://doi.org/10.1016/j.margeo.2020.106197)]
21. Mikami, T., Shibayama, T., Esteban, M. & Aránguiz, R. (2020): Comparative Analysis of Triggers for Evacuation during Recent Tsunami Events, *American Society of Civil Engineers*, 21(3), 04020022. [[doi/10.1061/\(ASCE\)NH.1527-6996.0000386](https://doi.org/10.1061/(ASCE)NH.1527-6996.0000386)]
22. Takabatake, T., Fujisawa, K., Esteban, M. & Shibayama, T. (2020): Simulated effectiveness of a car evacuation from a tsunami, *International Journal of Disaster Risk Reduction*, 47, 101532. [[doi.org/10.1016/j.ijdrr.2020.101532](https://doi.org/10.1016/j.ijdrr.2020.101532)]
23. Esteban, M., Roubos, J. J., Iimura, K., Salet, J. T., Hofland, B., Bricker, J., Ishii, H., Hamano, G., Takabatake, T. & Shibayama, T. (2020): Effect of bed roughness on tsunami bore propagation and overtopping, *Coastal Engineering*, 157, 103539. [[doi.org/10.1016/j.coastaleng.2019.103539](https://doi.org/10.1016/j.coastaleng.2019.103539)]
24. Nagai, R., Takabatake, T., Esteban, M., Ishii, H. & Shibayama, T. (2020): Tsunami risk hazard in Tokyo Bay: The challenge of future sea level rise, *International Journal of Disaster Risk Reduction*, 45, 101321. [[doi.org/10.1016/j.ijdrr.2019.101321](https://doi.org/10.1016/j.ijdrr.2019.101321)]
25. Hamano, G., Ishii, H., Iimura, K., Takabatake, T., Stolle, J., Esteban, M. & Shibayama, T. (2020): Evaluation of force exerted by tetrapods displaced by tsunami on caisson breakwater

- return wall, *Coastal Engineering Journal*, 62(2), 170-181. [[doi.org/10.1080/21664250.2020.1723194](https://doi.org/10.1080/21664250.2020.1723194)]
26. Ohira, K., Takabatake, T., Mikami, T. & Shibayama, T. (2020): Impact assessment of sloshing in bays and lakes, *Journal of JSCE*, 8(1), 13–25. [[doi.org/10.2208/journalofjsce.8.1\\_13](https://doi.org/10.2208/journalofjsce.8.1_13)]
  27. Soltanpour, M., Shamsnia, S.H., Shibayama, T. & Nakamura, R. (2020): Experimental and analytical investigation of the response of a mud layer to solitary waves, *Ocean Dynamics*, 70, 165–186. [[doi.org/10.1007/s10236-019-01319-6](https://doi.org/10.1007/s10236-019-01319-6)]
  28. Takabatake, T., Esteban, M., Nistor, I., Shibayama, T. & Nishizaki, S. (2020): Effectiveness of hard and soft tsunami countermeasures on loss of life under different population scenarios, *International Journal of Disaster Risk Reduction*, 45, 101491. [[doi:10.1016/j.ijdr.2020.101491](https://doi.org/10.1016/j.ijdr.2020.101491)]
  29. Nakamura, R., Shibayama, T., Esteban, M., Iwamoto, T. & Nishizaki, S. (2020): Simulations of future typhoons and storm surges around Tokyo Bay using IPCC AR5 RCP 8.5 scenario in multi global climate models, *Coastal Engineering Journal*, 62(1), 101-127. [[doi:10.1080/21664250.2019.1709014](https://doi.org/10.1080/21664250.2019.1709014)]
  30. Harnantyari, A., Takabatake, T., Esteban, M., Valenzuela, P., Nishida, Y., Shibayama, T., Achiari, H., Rusli, Marzuki, A., Marzuki, M., Aránguiz, R. & Thit Oo Kyaw (2019): Tsunami awareness and evacuation behaviour during the 2018 Sulawesi Earthquake tsunami, *International Journal of Disaster Risk Reduction*, in Press. [[doi:10.1016/j.ijdr.2019.101389](https://doi.org/10.1016/j.ijdr.2019.101389)]
  31. Nakamura, R., Mäll, M. & Shibayama, T. (2019): Street-scale storm surge load impact assessment using fine-resolution numerical modelling: a case study from Nemuro, Japan, *Natural Hazards*, 1-32. [[doi:10.1007/s11069-019-03746-6](https://doi.org/10.1007/s11069-019-03746-6)]
  32. Takabatake, T., Shibayama, T., Esteban, M., Achiari, H., Nurisman, N., Gelfi, M., Tarigan, T., Kencana, E., Fauzi, M., Panalaran, S., Harnantyari, A. & Thit Oo Kyaw (2019): Field survey and evacuation behaviour during the 2018 Sunda Strait tsunami, *Coastal Engineering Journal*. [[doi:10.1080/21664250.2019.1647963](https://doi.org/10.1080/21664250.2019.1647963)]
  33. Stolle, J., Krautwald, C., Robertson, I., Achiari, H., Mikami, T., Nakamura, R., Takabatake, T., Nishida, Y., Shibayama, T., Esteban, M., Nistor, I. & Goseberg, N. (2019): Engineering Lessons from the 28 September 2018 Indonesian Tsunami: Debris Loading, *Canadian Journal of Civil Engineering*. [[doi:10.1139/cjce-2019-0049](https://doi.org/10.1139/cjce-2019-0049)]
  34. Mikami, T., Shibayama, T., Esteban, M., Takabatake, T., Nakamura, R., Nishida, Y., Achiari, H., Rusli, Marzuki, A., Marzuki, M., Stolle, J., Krautwald, C., Robertson, I., Aranguiz, R. & Ohira, K. (2019): Field Survey of the 2018 Sulawesi Tsunami: Inundation and Run-up Heights and Damage to Coastal Communities, *Pure and Applied Geophysics*, 1-14. [[doi:10.1007/s00024-019-02258-5](https://doi.org/10.1007/s00024-019-02258-5)]
  35. Takabatake, T., St-Germain, P., Nistor, I., Stolle, J. & Shibayama, T. (2019): Numerical modelling of coastal inundation from Cascadia Subduction Zone tsunamis and implications for

coastal communities on western Vancouver Island, Canada, *Natural Hazards*, 1-25.

[doi:10.1007/s11069-019-03614-3]

36. Stolle, J., Takatabate, T., Hamano, G., Ishii, H., Iimura, K., Shibayama, T., Nistor, I., Goseberg, N. & Petriu, E. (2019): Debris transport over a sloped surface in tsunami-like flow conditions, *Coastal Engineering Journal*. [doi:10.1080/21664250.2019.1586288]
37. Xie, W., Shibayama, T. & Esteban, M. (2019): A semi-empirical formula for calculating the breaking depth of plunging waves, *Coastal Engineering Journal*. [doi:10.1080/21664250.2019.1579459]
38. Esteban, M., Jamero, M., Nurse, L., Yamamoto, L., Takagi, H., Thao, N., Mikami, T., Kench, P., Onuki, M., Nellas, A., Crichton, R., Valenzuela, V., Chadwick, C., Avelino, J., Tan, N. & Shibayama, T. (2019): Adaptation to sea level rise on low coral islands: Lessons from recent events, *Ocean & Coastal Management*, 168, 35-40. [doi:10.1016/j.ocecoaman.2018.10.031]
39. Takabatake, T., Mäll, M., Esteban, M., Nakamura, R., Thit Oo Kyaw, Ishii, H., Valdez, J., Nishida, Y., Noya, F. & Shibayama, T. (2018): Field Survey of 2018 Typhoon Jebi in Japan: Lessons for Disaster Risk Management, *Geosciences*, 8(11), 412. [doi:10.3390/geosciences8110412]
40. Soltanpour, M., Shamsnia, S. H., Shibayama, T. & Nakamura, R. (2018): A study on mud particle velocities and mass transport in wave-current-mud interaction, *Applied Ocean Research*, 78, 267-280. [doi:10.1016/j.apor.2018.06.019]
41. Esteban, M., Bricker, J., San Carlos Arce, R., Takagi, H., Yun, N., Chaiyapa, W., Sjoegren, A. & Shibayama, T. (2018): Tsunami awareness: a comparative assessment between Japan and the USA, *Natural Hazards*, 1-22. [doi:10.1007/s11069-018-3365-1]
42. Stolle, J., Takabatake, T., Nistor, I., Mikami, T., Nishizaki, S., Hamano, G., Ishii, I., Shibayama, T., Goseberg, N. & Petriu, E. (2018): Experimental investigation of debris damming loads under transient supercritical flow conditions, *Coastal Engineering*, 139, 16-31. [doi:j.coastaleng.2018.04.026]
43. Takabatake, T., Shibayama, T., Esteban, M., & Ishii, H. (2018): Advanced casualty estimation based on tsunami evacuation intended behavior: a case study at Yuigahama Beach, Kamakura, Japan. *Natural Hazards*, 1-26. [doi:10.1007/s11069-018-3277-0]
44. Esteban, M., Takagi, H., Mikami, T., Bahbouh, L., Becker, A., Nurse, L., Shibayama, T. & Nagdee, M. (2017): How to Carry Out Bathymetric and Elevation Surveys on a Tight Budget: Basic Surveying Techniques for Sustainability Scientists. *International Journal of Sustainable Future for Human Security J-Sustain*, 5(2), 86-91. [doi:10.24910/jsustain/5.2/8691]

45. Esteban, M., Glasbergen, T., Takabatake, T., Hofland, B., Nishizaki, S., Nishida, Y., Stolle, J., Nistor, I., Bricker, J., Takagi, H. & Shibayama, T. (2017): Overtopping of Coastal Structures by Tsunami Waves. *Geosciences*, 7(4), 121. [doi:10.3390/geosciences7040121]
46. Stolle, J., Takabatake, T., Mikami, T., Shibayama, T., Goseberg, N., Nistor, I. & Petriu, E. (2017): Experimental investigation of debris-induced loading in tsunami-like flood events. *Geosciences*, 7(3), 74. [doi:10.3390/geosciences7030074]
47. Mäll, M., Suursaar, Ü., Nakamura, R., & Shibayama, T. (2017): Modelling a storm surge under future climate scenarios: case study of extratropical cyclone Gudrun (2005). *Natural Hazards*, 89(3), 1119–1144. [doi:10.1007/s11069-017-3011-3]
48. Okumura, N., Jonkman, S. N., Esteban, M., Hofland, B. & Shibayama, T. (2017): A method for tsunami risk assessment: a case study for Kamakura, Japan. *Natural Hazards*, 1-22. [doi:10.1007/s11069-017-2928-x]
49. Arce, R. S. C., Onuki, M., Esteban, M., & Shibayama, T. (2017): Risk awareness and intended tsunami evacuation behaviour of international tourists in Kamakura City, Japan. *International Journal of Disaster Risk Reduction*, 23, 178-192. [doi:10.1016/j.ijdr.2017.04.005]
50. Takabatake, T., Shibayama, T., Esteban, M., Ishii, H. & Hamano, G. (2017): Simulated tsunami evacuation behaviour of local residents and visitors in Kamakura, Japan, *International Journal of Disaster Risk Reduction*, 23, 1-14. [doi:10.1016/j.ijdr.2017.04.003]
51. Stolle, J., Nistor, I., Goseberg, N., Shibayama, T. & Mikami, T. (2017): Entrainment and Transport Dynamics of Shipping Containers in Extreme Hydrodynamic Conditions, *Coastal Engineering Journal*, 59(3), 1750011. [doi:10.1142/S0578563417500115]
52. Jayaratne, M. P. R., Premaratne, B., Adewale, A., Mikami, T., Matsuba, S., Shibayama, T., Esteban, M. & Nistor, I. (2016): Failure Mechanisms and Local Scour at Coastal Structures Induced by Tsunami, *Coastal Engineering Journal*, Volume 58, Issue 04, [doi:10.1142/S0578563416400179].
53. Goseberg, N., Stolle, J., Nistor, I. & Shibayama, T. (2016): Experimental analysis of debris motion due to the obstruction from fixed obstacles in tsunami-like flow conditions, *Coastal Engineering*, 118, 35-49. [doi:10.1016/j.coastaleng.2016.08.012]
54. Nistor, I., Goseberg, N., Mikami, T., Shibayama, T., Stolle, J. Nakamura, R. & Matsuba, S. (2016): Experimental Investigations of Debris Dynamics over a Horizontal Plane, *Journal of Waterways, Ports, Ocean and Coastal Engineering*, 143(3), 04016022. [doi:10.1061/(ASCE)WW.1943-5460.0000371].



55. Goseberg, N., Nistor, I., Mikami, T., Shibayama, T., & Stolle, J. (2016): Nonintrusive Spatiotemporal Smart Debris Tracking in Turbulent Flows with Application to Debris-Laden Tsunami Inundation, *Journal of Hydraulic Engineering*, , 142(12), 04016058. [\[doi:10.1061/\(ASCE\)WW.1943-5460.0000225\]](https://doi.org/10.1061/(ASCE)WW.1943-5460.0000225)
56. Nakamura, R., Shibayama, T., Esteban, M., & Iwamoto, T. (2016): Future Typhoon and Storm Surges under Different Global Warming Scenarios: Case Study of Typhoon Haiyan (2013), *Natural Hazards*, 82(3), 1645-1681. [\[doi:10.1007/s11069-016-2259-3\]](https://doi.org/10.1007/s11069-016-2259-3) °
57. Mikami, T., Shibayama, T., Takagi, H., Matsumaru, R., Esteban, M., Thao, N. D., De Leon, M., Valenzuela, V. P., Oyama, T., Nakamura, R., Kumagai, K. & Li, S. (2016): Storm Surge Heights and Damage Caused by the 2013 Typhoon Haiyan along the Leyte Gulf Coast, *Coastal Engineering Journal*, 58(1), 1640005. [doi:10.1142/S0578563416400052]
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