Motoyasu Kanazawa

Assistant Professor, Ocean Technology, Policy, and Environment

Graduate School of Frontier Sciences, The University of Tokyo

OES Lab: https://oister-lab.edu.k.u-tokyo.ac.jp/

GitHub LinkedIn Google Scholar

Research Interests

Ship dynamics; marine systems; maneuvering models; motion prediction; system identification; physics-data cooperative modeling; data-driven enhancement of physics-based models; offshore and ocean engineering.

Current Position

2026–present	Assistant Professor, Ocean Technology, Policy, and Environment, Graduate School of Frontier Sciences, The University of Tokyo.

Education

2023	Ph.D., Department of Ocean Operations and Civil Engineering, Faculty of Engineering, Norwegian University of Science and Technology. Thesis: *Data-Driven Enhancement to Ship Dynamic Model for Motion Prediction.*
2019	M.S., Department of Ocean Technology, Policy, and Environment, Graduate School of Frontier Sciences, The University of Tokyo.
2016	B.S., Department of Mechanical Engineering, Faculty of Science and Technology, Tokyo University of Science.

Professional Experience

2025–2026	AI Engineer, Emuni Inc.
2023–2025	Bosch Corporation.
2019–2020	Japan Marine United Corporation.
2017–2018	Intern, SINTEF Ocean, Norway.

Peer-Reviewed Journal Papers

1. M. Kanazawa, R. Wada, T. Wang, and H. Zhang, "Efficient Representation of New Ship Dynamics Through Reuse of Existing Maneuvering Models," *IEEE Transactions on Automation Science and Engineering*, accepted, 2026.

2. T. Wang, R. Skulstad, M. Kanazawa, G. Li, and H. Zhang, "Learning Nonlinear Dynamics of Ocean Surface Vessel With Multistep Constraints," *IEEE Transactions on Industrial Informatics*, 2024.

3. M. Kanazawa, T. Wang, Y. Ichinose, R. Skulstad, G. Li, and H. Zhang, "Bridging Similar Ships' Dynamics for Safeguarding the System Identification of Maneuvering Models," *Ocean Engineering*, 2023.

4. T. Wang, R. Skulstad, M. Kanazawa, G. Li, and H. Zhang, "Knowledge Transfer Strategy for Enhancement of Ship Maneuvering Model," *Ocean Engineering*, 2023.

5. M. Kanazawa, T. Wang, R. Skulstad, G. Li, and H. Zhang, "Knowledge and Data in Cooperative Modeling: Case Studies on Ship Trajectory Prediction," *Ocean Engineering*, 2022.

6. M. Kanazawa, R. Skulstad, G. Li, L. I. Hatledal, and H. Zhang, "A Multiple-Output Hybrid Ship Trajectory Predictor With Consideration for Future Command Assumption," *IEEE Sensors Journal*, 2021.

7. M. Kanazawa, R. Skulstad, T. Wang, G. Li, L. I. Hatledal, and H. Zhang, "A Physics-Data Co-Operative Ship Dynamic Model for a Docking Operation," *IEEE Sensors Journal*, 2021.

8. M. Mukhlas, P. F. Lader, D. Kristiansen, T. Kristiansen, and M. Kanazawa, "Bag and Floater Motions of a Fabric Membrane Cage," *Journal of Fluids and Structures*, 2021.

9. M. Kanazawa, R. Wada, and M. Ozaki, "Analytical Investigation of Key Factors for Dynamic Minimum Tension in Free-Hanging Slender Structures With Simplified Lumped Mass Model," *Ocean Engineering*, 2020.

Conference Papers and Proceedings

1. M. Kanazawa, T. Wang, R. Skulstad, G. Li, and H. Zhang, "Physics-Data Cooperative Ship Motion Prediction With Onboard Wave Radar for Safe Operations," Proceedings of the 32nd International Symposium on Industrial Electronics (ISIE), 2023.

2. M. Kanazawa, L. I. Hatledal, G. Li, and H. Zhang, "Co-Simulation-Based Pre-Training of a Ship Trajectory Predictor," Lecture Notes in Computer Science, Springer, 2022.

3. T. Wang, L. I. Hatledal, M. Kanazawa, G. Li, and H. Zhang, "Effect of Ship Propulsion Retrofit on Maneuverability Research Based on Co-Simulation," Lecture Notes in Computer Science, Springer, 2022.

4. T. Wang, R. Skulstad, M. Kanazawa, G. Li, V. Aesoy, and H. Zhang, "Physics-Informed Data-Driven Approach for Ship Docking Prediction," Proceedings of the IEEE International Conference on Real-Time Computing and Robotics (RCAR), 2022.

5. T. Wang, R. Skulstad, M. Kanazawa, L. I. Hatledal, G. Li, and H. Zhang, "Adaptive Data-Driven Predictor of Ship Maneuvering Motion Under Varying Ocean Environments," Proceedings of the 11th International Symposium on Leveraging Applications of Formal Methods (ISoLA), 2022.

6. B. Wu, P. Han, M. Kanazawa, H. P. Hildre, L. Zhao, H. Zhang, and G. Li, "A Camera-Based Deep-Learning Solution for Visual Attention Zone Recognition in Maritime Navigational Operations," Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2022.

7. M. Kanazawa, R. Wada, and M. Ozaki, "Analytical Approach on Dynamic Tension of Free Hanging Configuration," Proceedings of the ASME 37th International Conference on Ocean, Offshore and Arctic Engineering (OMAE), 2018.

8. M. Ito, M. Kanazawa, R. Wada, and M. Ozaki, "Three-Dimensional Performance Analysis of a Floating Breakwater Craft for Offshore Operation," Conference Proceedings of the Japan Society of Naval Architects and Ocean Engineers, 2017.

9. R. Wada, M. Kanazawa, M. Yamamoto, and H. Yoshimoto, "Phase Difference of Mooring Tension in Dynamic Analysis," Conference Proceedings of the Japan Society of Naval Architects and Ocean Engineers, 2016.

Invited and Seminar Talks

- December 10, 2025. "Data-Driven Enhancement of Dynamic Models for Ship Motion Prediction," Kashiwa Ocean Seminar.

Teaching

- 2023. Lecturer, NTNU MarinTech summer school on maritime digitalization. MarinTech: Romanian–Norwegian strategic cooperation in maritime higher education for enhancement of human capital and knowledge base in marine intelligent technologies.

Honors and Awards

- 2019. Dean's Award, Graduate School of Frontier Sciences, The University of Tokyo.
- 2019. Scholarship Award, The Japan Society of Naval Architects and Ocean Engineers.

Last updated: August 5, 2026.