March 6, 2026

AYUMI FUJISAKI-MANOME

ORCID: 0000-0001-5466-6332
Home page: https://ciglr.seas.umich.edu/ayumi-manome/

Cooperative Institute for Great Lakes Research
University of Michigan
4840 S. State Rd, Ann Arbor, MI 48108
Phone: 734-741-2289 (office), 734-834-9219 (cell)
Email: ayumif@umich.edu, ayumi.fujisaki@noaa.gov

Education

Ph.D., Ocean Engineering, the University of Tokyo in 2009
- Thesis title: "Ice-ocean coupled system in the Sea of Okhotsk based on a high-resolution numerical model." (Advisor: Hajime Yamaguchi)

M.S., Ocean Engineering, the University of Tokyo in 2006
- Thesis title: "Improvement of Short-Term Sea Ice Forecast in the Southern Okhotsk Sea." (Advisor: Hajime Yamaguchi)

B.S., Electronics and Electrical Engineering, Keio University in 2004
- Thesis title: "Influence of A/D Conversion Error on Wireless Communications using OFDM Modulation." (Advisor: Yukitoshi Sanada)

Professional Positions

- *2025-present*: Associate Director, Cooperative Institute for Great Lakes Research (CIGLR)
- *2023-present*: Associate Research Scientist, Cooperative Institute for Great Lakes Research (CIGLR), School for Environment and Sustainability at the University of Michigan.
- *2023-2024*: Associate Research Scientist, Climate & Space Sciences and Engineering, University of Michigan (Dry appointment)
- *2016-2023*: Assistant Research Scientist, , Cooperative Institute for Great Lakes Research (CIGLR), School for Environment and Sustainability at the University of Michigan.
- *2016-2023*: Assistant Research Scientist, Climate & Space Sciences and Engineering, University of Michigan (Joint appointment)
- *2011 – 2016*: Postdoctoral Research Fellow, Cooperative Institute for Limnology and Ecosystems Research (CILER), School of Natural Resources and Environment, University of Michigan.
- *2010*: Postdoctoral Research Fellow, Institute of Low Temperature Science, Hokkaido University (short stay while waiting for the visa process at U-M)
- *2009-2010*: Visiting Postdoctoral Research Fellow, Atmospheric and Oceanic Science Program, Princeton University. Funded by JSPS fellowship.
- *2008-2009*: Graduate Research Fellow, University of Tokyo, supported by the Japan Society for the Promotion of Science (JSPS).

Honors and Awards

- 2021 Outstanding Science Paper Award by NOAA Office of Oceanic Atmospheric Research. *Paper title: "Improvements to Lake-Effect Snow Forecasts Using a One-Way Air–Lake Model*

Coupling Approach." (Publication #16)
- The NOAA Team Member of the Month Award, April 2019.
- Estuarine and Coastal Modeling Best Paper Award, 2018, with other co-authors. (Publication #13)
- Outstanding Young Scientist Award, International Workshop on Modeling the Ocean, Norfolk, VA, May 24-26, 2010. A. Fujisaki (Manome) and L. Oey, "Formation of ice bands by wind", 3rd place.
- The Japan Society for the Promotion of Science, Research Fellowship, 2008-2009.
- Outstanding Young Scientist Award, International Workshop on Modeling the Ocean, Taipei, Feb. 26, 2009. A. Fujisaki (Manome), H. Yamaguchi, H. Mitsudera, "Investigation of ice-ocean coupled system in the Sea of Okhotsk using a numerical model", 2nd place.
- Scientific Award, The Cold Region Technology Conference, Sapporo, Nov. 29, 2006. A. Fujisaki (Manome), H. Yamaguchi, F. Duan, K. Takemori, "Improvement of Short-term Numerical Sea Ice Forecasting in the Southern Okhotsk Sea (in Japanese)"

Research Grants

For each grant, I indicate any of four types of grants which are described below:

"Open competitive": These grants indicate those awarded through successful external grant proposals in funding opportunities open to university PIs.

"NOAA internal competitive": These grants indicate those awarded through NOAA internal funding opportunities (i.e., not open to university PIs) where I serve as a Co-PI or Collaborator and funds are transferred to the university through the NOAA Cooperative Agreement. Note that I am heavily involved in the intellectual development of these "NOAA internal competitive" proposals by co-developing ideas with PIs at NOAA Great Lakes Environmental Research Laboratory (GLERL) and contributing to proposal writing.

"UM internal competitive": These grants are those awarded internally within the university.

"Non-competitive' grants": These are obtained by GLERL without any competition (directed) or in which I had no role in the proposal that brought the funds to GLERL, but I still help coordinate the research by supervising of CIGLR staff and postdocs, and overseeing communications among scientists at GLERL, CIGLR, and partner institutions.

[*]*National Oceanic and Atmospheric Administration*

29. National Oceanic and Atmospheric Administration, "Smart Weather and Water: Safeguarding the Great Lakes and Boosting Our Economy", $805,842, PI, 7/1/2025-6/302026. Non-competitive.
28. CIGLR Postdoctoral Fellowship, "Assessment and forecasting of floods in the Laurentian Great Lakes region using hydrological-hydrodynamic modeling", $90,000, Collaborator with Prof. Yadu Pokhrel (Michigan State U.) and Dr. Amar Deep Tiwari, July 2024-June 2025. Open to CIGLR partner institutions.
27. CIGLR Graduate Fellowship, "Enable Year-round Great Lake Observation with Floating Offshore Platform to Power Autonomous Underwater Vehicles", $40,000, Collaborator with Prof. Lei Zuo (UM NAME) and Ms. Wei-Ying Wong. January 1, 2025-December 2025. Open to CIGLR partner institutions.

26. National Oceanic and Atmospheric Administration, Global Ocean Monitoring and Observing, Arctic Research Program, "Co-designing a short-term sea ice prediction tool for Alaska's coasts through advancing sea ice modeling and iterative research engagement", $377,905, PI, 8/1/2024-7/31/2027, Competitive to NOAA cooperative institutes only.
25. National Science Foundation, "Advancing understanding of interannual variability and extreme events in the thermal structure of large lakes under historical and future climate scenarios", $519,517, PI, 1/1/2024-12/31/2026. Open Competitive.
24. Michigan Institute for Computational Discovery & Engineering (MICDE) Catalyst Grants, "Computational modeling of a coupled aero-hydro-structural-mooring integrated dynamic system with deep learning for floating offshore wind turbine design", $75,000, co-PI (PI Jeremy Bricker, CEE), 11/1/2023-10/31/2024, UM internal competitive.
23. CIGLR Postdoctoral Fellowship, "Monitoring Lake Ontario Using Distributed Fiber Optic Sensing", $89,677, Collaborator with Prof. Zack Spica (UM EES) and Dr. Kim Chu-Fang Yang. January 1, 2024-December 2024. Open to CIGLR partner institutions.
21. National Science Foundation, "The role of wave-current-ice interaction to a freshwater-plume dynamics", UM Sub-award amount $75,741, Co-PI (PI Meng Xia, U. Maryland East Shore), 12/01/2022-11/30/2025. Open Competitive.
20. NOAA, Weather Program Office Joint Technology Transfer Initiative, "Advancing the Lake-Coupling Techniques for the Unified Forecast System (UFS)", $899,133 (total, UM amount $779,133, Fujisaki-Manome's portion $161,182), Co-PI, 09/01/2022 - 08/31/2025. Open competitive.
19. NOAA Great Lakes Environmental Research Laboratory, "Advanced modeling to support probabilistic projections of total water levels in Great Lakes coastal areas under climate scenarios", $314,326, PI, 7/1/2022-6/30/2024. Open competitive.
18. CIGLR Postdoctoral Fellowship, "Coupling FVCOM-ice output with a forcing and response model for wind turbines in Lake Erie", $70,000, Collaborator with Prof. Jeremy Bricker (UM CEE) and Dr. Pengxu. June 1, 2022-May 2023. Open to CIGLR partner institutions.
17. NOAA Great Lakes Environmental Research Laboratory, "Great Lakes Oil spill research to support the Great Lakes National Center of Expertise", $415 692, PI, 1/1/2022-6/30/2025. Non-competitive.
16. Michigan Institute for Data Science (MIDAS), 2021 Propelling Original Data Science (PODS) Grants, "Supporting decision-making for a vital waterway in the Great lakes by machine learning model-based lake ice forecasting", $30,000, PI, 6/10/2021-6/9/2022. UM internal competitive.
15. NOAA Great Lakes Environmental Research Laboratory, "Developing Great Lakes Earth System Model (GLESM)", $459,000, PI, 7/1/2022-6/30/2024. Non-competitive.
14. NOAA Great Lakes Environmental Research Laboratory, "Development of a Coupled Hydrodynamic-Wave Model using FVCOM and WAVEWATCH III", $75,525, PI, July 1, 2022-June 30, 2025. Non-competitive.
13. NOAA Great Lakes Environmental Research Laboratory, "Improved Ice Modeling for the Great Lakes and the Arctic Ocean", $402,534, PI, July 1, 2020-June 30,2025. Non-competitive.
12. NOAA, Office of Weather and Air Quality, "*Improving Lake-Effect Snow Forecasting Capabilities via Advanced Coupling Techniques in NOAA's Unified Forecast System (UFS)*", $750,000 (total, UM amount $615,000, Fujisaki-Manome's portion $238,487), Co-PI, 07/01/2019 - 06/30/2022. Open competitive.
11. NOAA, Climate Program Office, "Scaling-up Stakeholder Engagement Workshops to Inform

Better Communication & Uptake of NOAA Great Lakes Ice Forecast Information", Co-PI, $200,000, 10/01/2019 - 09/30/2022. Non-competitive.

10. University of Michigan Graham Sustainability Institute, "Knowledge co-production in effective communication of Great Lakes ice forecasts", $10,000, Jan.2019-Aug.2019. PI. UM internal competitive.
9. NOAA Great Lakes Environmental Research Laboratory, "Building Coupled Storm Surge and Wave Operational Forecasting Capacity for Western Alaska", Oct.2018-Sep.2021. Collaborator with U. Notre Dame and NOAA GLERL, U-M received $330,206. Open competitive.
8. NOAA Great Lakes Environmental Research Laboratory, "Implementation of the FVCOM-Ice model for the Great Lakes Operational Forecasting System (GLOFS)", $314,074, Sep.2017-Aug.2021. Co-PI. NOAA internal competitive.
7. NOAA, Office of Weather and Air Quality, "Improving Lake-Effect Snow and Cloud Forecast Capability for the Great Lakes Region", $243,702, Aug.2017-Jul.2019. Co-PI. Open competitive.
6. NOAA Great Lakes Environmental Research Laboratory, "Evaluation of the evaporation and heat flux algorithms for the Great Lakes based on the eddy covariance measurements", $110,000, Sept.2016-Aug. 2017. Co-PI. Non-competitive.
5. NOAA Great Lakes Environmental Research Laboratory, "Modeling sea ice-ocean-ecosystem responses to climate changes in the Arctic Ocean and East Siberian Sea using CIOM/PhEcoM with data assimilation from RUSALCA measurements", $75,000. Jul. 2016 – Jun. 2019. Co-PI. Non-competitive.
4. NOAA Great Lakes Environmental Research Laboratory, "A high-resolution atmospheric, wave and circulation model guidance system for the Great Lakes Region,". Jul. 2014 – Aug. 2017. Collaborator, U-M received $343,770. NOAA internal competitive.
3. NOAA, Climate Program Office, "Modeling sea ice-ocean-ecosystem responses to climate changes in the Arctic Ocean and East Siberian Sea using CIOM/PhEcoM with data assimilation from RUSALCA measurements", $75,000. Jul. 2016 – Jun. 2019. Co-PI. Non-competitive.
2. The Japan Society for the Promotion of Science (JSPS). Grant-in-Aid for Scientific Research for fellows: "Investigation of the ice-ocean coupled system in the Sea of Okhotsk based on a high-resolution numerical model," 2-year stipend 4,800,000 JPY (~$43,000) + research grant 1200,000 JPY (~$11,000). Apr. 2008 – Mar. 2009. PI. Open competitive.
1. Sasagawa Grant for Scientific Research, Japan Science Society, "Development of a high-resolution ice forecast system in the coastal region off Hokkaido", PI, 600,000 JPY (~$5,500). Apr. 2006 – Mar. 2007. PI. Open competitive.

Publications (Student, postdoc, staff authors mentored by me are underlined, marked with an asterisk (*) and a dagger (†), respectively)

Submitted

55. Cannon, D.J., Abdelhady, H.U., **Fujisaki-Manome, A**., Raju, M., Wang, J., Kessler, J., Viere, E., Bafna, K., Seeing beyond the satellite era: synthesis of century-long data reveals large-lake ice trends are more complex, Communications & Earth Environment, under review.

54. Tiwari, A.D., Pokhrel, Y., **Fujisaki-Manome, A.**, Hong, Y., Fry, L., RafieeiNasab, A., High-Resolution Flood Assessment and Forecasting in the Great Lakes Basin using Hydrological-Hydrodynamic Models and Socioeconomic Indicators, submitted to *Journal of Hydrology*.

In revision

53. Wright, D., Jablonowski, C., **Fujisaki-Manome, A**., Mroczka, B., Gilbert, A., Titze, D., Mann, G., Anderson, E.J., The Sensitivity of Lake-Effect Snowfall to Changes in Lake Surface Conditions Across the Forecast Horizon in the Unified Forecast System's Short-Range Weather Application (UFS-SRW), *Monthly Weather Review*, in revision.
52. Pereira, K., Anderson, E.J., Kessler, J., **Fujisaki-Manome, A.**, "Integrating Ice Analyses and Varying Floe Size Parameterization into Great Lakes Ice Prediction", submitted to *Journal of Geophysical Research-Oceans*.

Published

2026

51. King, K., **Fujisaki-Manome, A.**, Brant, C., Cohn, D., Peng, I., Alofs, K., Reconstructing Great Lakes air temperature and ice dynamics data back to 1897. Sci Data (2026). https://www.nature.com/articles/s41597-026-06637-1
50. Hutson, A., Ward. J., **Fujisaki-Manome, A.**, Jones, D., Hansen, S., (2026), Relationships between Great Lakes Extratropical Cyclone Characteristics and Global Teleconnections, Journal of Geophysical Research-Atmospheres, https://doi.org/10.1029/2025JD045180

2025

49. Yang, C-F, Spica, Z., **Fujisaki-Manome, A**., Miao, Y. (2025), "Fiber-optic observations capture wind wave evolution in Lake Ontario", Communications Earth & Environment, https://doi.org/10.1038/s43247-026-03182-y
48. Abdelhady, H.U.*, Cannon, D., **Fujisaki-Manome, A.,** Gronewold, A., Wang, J. (2025), The spatiotemporal dynamics of heatwaves and cold-spells in Earth's largest freshwater systems, *Geophysical Research Letters*, *52*, e2025GL116548, https://doi.org/10.1029/2025GL116548.
47. Hutson, A., Pettersen, C., **Fujisaki-Manome, A.**, Mann, G.E., and Nesbitt, S.W. (2025), Evaluating the Performance of Microphysics Schemes against Observations During High-Impact Lake-effect Snow Events, *Weather and Forecasting*, https://doi.org/10.1175/WAF-D-24-0249.1.
46. Park, K., Zhang, J., Di Lorenzo, E., Seroka, G., **Fujisaki-Manome, A**., Pe'eri, S., Moghimi, S., and Kelley, J. (2025), Evaluation of a 3D Unstructured Grid Model for the New York-New Jersey Harbor under Different Forcing Sources, *Ocean Modeling*, *197*, https://doi.org/10.1016/j.ocemod.2025.102598.
45. Wu, Y., Huang, A., Lu, Y., **Fujisaki-Manome, A.**, Wen, L. (2025), Application of a Three-Dimensional Coupled Hydrodynamic-Ice Model for a Large and Deep Dimictic Lake over Tibetan Plateau: Thermo-hydrodynamic Variations during 2007-2017, *Journal of Geophysical Research – Atmospheres*, 130, e2025JD043846, https://doi.org/10.1029/2025JD043846.
44. Shin, S., Gronewold, A.D., Fry, L.M., Hong, Y., Cannon, D., **Fujisaki-Manome, A.** (2025), Long-term hydroclimate trends in the Great Lakes basin: Are there hotspots of regional change?, Journal of Hydrology: Regional Studies, 59, 102347, https://doi.org/10.1016/j.ejrh.2025.102347.

43. Abdelhady, H.U.*, **Fujisaki-Manome, A.**, Cannon, D.J., Gronewold, A.D., Wang, J. (2025), Climate Change-Induced Amplification of Extreme Temperatures in Large Lakes, *Communications Earth & Environment*, **6**, 375 (2025). https://doi.org/10.1038/s43247-025-02341-x.
42. Javaherian, M. J., Cannon, D., Wang, J., **Fujisaki-Manome, A**., Peng, B., and Zuo, L. (2025), Simulating ice–wave interactions in the Laurentian Great Lakes using a fully coupled hydrodynamic–ice–wave model, Ocean Modeling, 195, 102513, https://doi.org/10.1016/j.ocemod.2025.102513.
41. Hu, H.†, Titze, D., **Fujisaki-Manome, A.**, Mroczka, B., Wang, J., Hawley, N., Orendorf, S., Frank, K., and Ruberg, S. (2025), Winter ice-wave modeling with WAVEWATCH III in Lake Erie, Journal of Geophysical Research – Oceans, s, 130, e2024JC021146, https://doi.org/10.1029/2024JC021146.
40. Song, Y.†, **Fujisaki-Manome, A.**, Barker, C. H., MacFadyen, A., Titze, D., Kessler, J., & Wang, J. (2025). Introducing a simple convex hull method to calibrate diffusion coefficients in Lagrangian particle models. Ocean Engineering, 316, 119926. https://doi.org/10.1016/j.oceaneng.2024.119926

2024

39. Gill, D.G., Jagannathan K.A., **Fujisaki-Manome, A.**, Field, V., Channel, K., Lemos, M.C. (2024), Linking boundary organizations to co-produce actionable knowledge: A case study of ice forecasting for Great Lakes navigation, Weather, Climate, and Society, https://doi.org/10.1175/WCAS-D-24-0012.1.
38. Yeo, A.J., Anderson, E.J., Jablonowski, C., Wright, D.M., Mann, G.E., **Fujisaki-Manome, A.**, Mroczka, B., Titze, D. (2024), Assessing the Potential for Medium-Range Ice Forecasts in the Laurentian Great Lakes, Water Resources Research, 60, e2024WR037507. https://doi.org/10.1029/ 2024WR037507.
37. Hutson, A., **Fujisaki-Manome, A.,** and Glassman, R. (2024), "Historical Trends in Cold-Season Mid-Latitude Cyclones in the Great Lakes Region", *Geophysical Research Letters*, 51, e2024GL109890. https://doi.org/10.1029/2024GL109890.
36. Zhang, Y. J., Anderson, J, Park, K., Wu, C.H., Wipperfurth, S., Anderson, E., Pe'eri S., Beletsky, D., Titze, D., Di Lorenzo, E., Moghimi, S. , Seroka, G., Myers, E., **Fujisaki-Manome, A.**, Kelley, J. (2024), Debunking common myths in coastal circulation modeling, Ocean Modeling, 190, https://doi.org/10.1016/j.ocemod.2024.102401.
35. Hutson, A.*, **Fujisaki-Manome, A.,** Lofgren, B.M. (2024), Testing the Sensitivity of a WRF-based Great Lakes Regional Climate Model to Cumulus Parameterization and Spectral Nudging, *Journal of Hydrometeorology,* https://doi.org/10.1175/JHM-D-22-0234.1.
34. **Fujisaki-Manome, A.**, Hu, H. Wang, J. Westerink, J., Wirasaet, D., Ling G, Choi, M., Moghimi, S., Myers, E., Abdolali , A., Dawson C., Janzen. C. (2024), "Advanced sea ice modeling for integration into a storm-surge, wave, and ice forecasting system for Alaska's coasts", *Weather and Forecasting*, https://doi.org/10.1175/WAF-D-23-0178.1.
33. Song, Y.†, **Fujisaki-Manome, A.,** Barker, C.H., MacFadyen, A., Kessler, J., Titze, D., and Wang, J. (2024), Modeling study on oil spill transport in the Great Lakes: The unignorable impact of ice cover, *J. Environmental Management*, 358, doi: 10.1016/j.jenvman.2024.120810.
32. Li, L., Fujisaki-Manome, A., Miller, R.; Titze D.; Henderson H., (2024), Evaluation of ICESat-2 Significant Wave Height Data with Buoy Observations in the Great Lakes and

Application in Examination of Wave Model Predictions. *Remote Sensing*, *16*, 679, https://doi.org/10.3390/rs16040679.

31. Zou, P., Bricker, J.D., **Fujisaki-Manome, A.,** Garcia, F.E. (2024), Characteristics of ice-structure-soil interaction of an offshore wind turbine, *Ocean Engineering, 295*, 2024, 116975, https://doi.org/10.1016/j.oceaneng.2024.116975.
30. Cannon, D.J.*, Wang, J., **Fujisaki-Manome, A.,** Kessler, J., Ruberg, S., Constant, S. (2024), Investigating Multidecadal Trends in Ice Cover and Subsurface Temperatures in the Laurentian Great Lakes Using a Coupled Hydrodynamic–Ice Model, *Journal of Climate*, *37*(4), pp. 1249-1276, https://doi.org/10.1175/JCLI-D-23-0092.1.

2023

29. Wu. Y., Huang, A., Lu,Y., **Fujisaki-Manome, A.,** Zhang, Z., Dai, X., Wang, Y. (2023), Application of a Three-Dimensional Coupled Hydrodynamic-Ice Model for a Large and Deep Dimictic Lake over Tibetan Plateau: Ice Variations during 2007-2017, *Journal of Geophysical Research – atmospheres, 128*(24), e2023JD038844, https://doi.org/10.1029/2023JD038844.
28. Zhang, H., Mason D.M., Boucher N.W., Rutherford E.S., Cannon D.J., Kessler J., **Fujisaki-Manome A.**, and Wang J., Fulton, EA. (2023), Effects of Vertical Mixing on the Lake Michigan Food Web: An Application of a Linked End-to-End Earth System Model Framework, *Ocean Dynamics*, 73, 545–556, https://doi.org/10.1007/s10236-023-01564-w.
27. Wang, J., **Fujisaki-Manome, A**., Kessler, J., Cannon, D., Chu, P. (2023), Inertial Instability and Phase Error in Euler Forward Predictor-Corrector Time Integration Schemes: Application to the improvement of modeling thermal structure in the Great Lakes, *Ocean Dynamics*, 73, 407-429, https://doi.org/10.1007/s10236-023-01558-8.
26. Cannon, D.J.*, **Fujisaki-Manome A**, Wang J; Kessler J; Chu P, (2023), **"**Modeling changes in ice dynamics and subsurface thermal structure in Lake Michigan-Huron between 1979 and 2021**",** *Ocean Dynamics , 73* (3-4) , 201-218 , DOI: 10.1007/s10236-023-01544-0 ,

2022

25. Benjamin, S.G., Smirnova, T.G., James, E.P., Anderson, E.J., **Fujisaki-Manome, A.,** Kelley, J.G.W., Mann, G.E., Gronewold, A.D., Chu, P., and Kelley, S.G.T. (2022), Inland lake temperature initialization via cycling with atmospheric data assimilation, *Geoscientific Model Development,* 15, 6659–6676, https://doi.org/10.5194/gmd-15-6659-2022.
24. Lin, Y.*., **Fujisaki-Manome, A.,** Anderson, E.J. (2022), Simulating Landfast Ice in Lake Superior, *Journal of Marine Science and Engineering*, *10*(7), 932; https://doi.org/10.3390/jmse10070932.
23. Liu, L., Davedu, S., **Fujisaki-Manome, A.,** Hu, H., Jablonowski, C., Chu, P.Y. (2022), Machine learning model-based ice cover forecasting for a vital waterway in large lakes, *Journal of Marine Science and Engineering, 10*(8), 1022; https://doi.org/10.3390/jmse10081022.
22. Lin, Y.*, **Fujisaki-Manome, A.**, Wang, J. (2022), Amplified variability of Great Lakes ice cover and in response to changing teleconnections, *Journal of Climate*, 1-52, DOI: https://doi.org/10.1175/JCLI-D-21-0448.1.
21. **Fujisaki-Manome,** A., Wright, D.M., Mann, G.E., Anderson, E.J., Chu, P.Y., Jablonowski, C., and Benjamin, S.G., (2022), Forecasting Lake/Sea-Effect Snowstorms, Advancement, and Challenges, *WIRES water*, *9*(4), 1-16, https://doi.org/10.1002/wat2.1594.

2021

20. Hu, H.†, Van der Westhuysen, A., Chu, P., and **Fujisaki-Manome, A.** (2021), Predicting Lake Erie Wave Heights using XGBoost and LSTM, *Ocean Modeling,* https://doi.org/10.1016/j.ocemod.2021.101832.
19. Ozerskey, T., Bramburger, A., Elgin, A., Vanderploeg, H., Wang, J., Austin, J., Carrick, H., Chavarie, L., Depew, D., Fisk, A., Hampton, S., Hinchey, E., North, R., Wells, M., Xenopoulos, M., Coleman, M., Duhaime, M., **Fujisaki-Manome, A.**, Mckay, R., Meadows, G., Rowe, M., Sharma, S., Twiss, M., Zastepa, A. (2021), The Changing Face of Winter: Lessons and Questions from the Laurentian Great Lakes, *Journal of Geophysical Research – Biogeosciences,* doi: 10.1029/2021JG006247.
18. Li, Y., Beletsly D., Wang, J., Austin, J., Kessler, J.A., **Fujisaki-Manome, A.**, Bai, P. (2021), Modeling a Large Coastal Upwelling Event in Lake Superior, *Journal of Geophysical Research,* 126, e2020JC016512. https://doi.org/10.1029/2020JC016512.

2020

17. Saiki, R., Mitsudera, H., **Fujisaki-Manome, A.**, Kimura, N., Ukita, J., Toyota, T., and Nakamura, T. (2020), A Mechanism of Ice-Band Pattern Formation Caused by Resonant Interaction between Sea Ice and Internal Waves in a Continuously Stratified Ocean, *Progress in Oceanography, 190*, 102474,DOI:10.1016/j.pocean.2020.102474.
16. **Fujisaki-Manome, A.,** Mann, G.E., Anderson, E.J., Chu, P.Y., Fitzpatrick, L.E., Benjamin, S.G., and Wright, D.M. (2020), Improvements to lake-effect snow forecasts by a one-way air-lake linkage approach, *Journal of Hydrometeorology*, https://doi.org/10.1175/JHM-D-20-0079.1.
15. Bai, P, Wang, J., Chu, Y.P., Hawley, N., **Fujisaki-Manome, A**, Kessler, J.A., Lofgren, B.M., Beletsky, D., Anderson, E.J., and Li Y. (2020), Modeling ice-attenuated waves in the Great Lakes, *Ocean Dynamics*, *70*, 991–1003, https://doi.org/10.1007/s10236-020-01379-z.
14. **Fujisaki-Manome, A.,** E.J. Anderson, J.A. Kessler, P.Y. Chu, J. Wang, and A.D. Gronewold, Simulating impacts of precipitation on ice cover and surface water temperature across large lakes, *Journal of Geophysical Research Oceans,* 125, e2019JC015950. https://doi.org/10.1029/2019JC015950.

2018

13. Anderson, E.J., **Fujisaki-Manome, A.**, Kessler, J., Chu, Y.P., Kelley, J., Lang, G., Chen, Y., and Wang, J. (2018), Ice Forecasting in the Next-Generation Great Lakes Operational Forecast System (GLOFS), *J. Mar. Sci. Eng.*, 6(123), doi:10.3390/jmse6040123.
12. Charusombat, U., **Fujisaki-Manome, A**., A.D. Gronewold, B.M. Lofgren, E.J. Anderson, P.D. Blanken, C. Spence, J.D. Lenters, C. Xiao, L.E. Fitzpatrick, and G. Cutrell (2018), Validating modeled turbulent heat fluxes across large freshwater surfaces, *Hydrol. Earth Syst. Sci.*, 22, 5559-5578, https://doi.org/10.5194/hess-22-5559-2018 (corresponding author).

2017

11. **Fujisaki-Manome, A**. L. Fitzpatrick, A.D. Gronewold, E.J. Anderson, C. Spence, J. Chen, C. Shao, D. Wright, C. Xiao, and B.M. Lofgren (2017), Turbulent Heat Fluxes during an Extreme Lake Effect Snow Event, *J. Hydrometeorology*, *18*(12), pp. 3145–3163.

2014

10. **Fujisaki (Manome)**, A., Mitsudera, H., Wang, J., and Wakatsuchi, M. (2014), How does the Amur River discharge flow over the northwestern continental shelf in the Sea of Okhotsk?, Progress in Oceanography., 126, pp. 8-20, doi: 10.1016/j.pocean.2014.04.028.
9. Wang, J., Cao, C., Mizobata, K., Hu, H., Bai, X., Yu, Y., Eicken, H., Ikeda, M., Johnson, W., Perie, W. **Fujisaki (Manome), A.** (2014), Modeling landfast ice and coastal circulation in the nearshore Beaufort and Chukchi Seas using CIOM, Journal of Geophysical Research-Oceans, 119(6), pp. 3285-3312, doi: 10.1002/2013JC009258.

2013

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7. **Fujisaki (Manome), A.**, Wang, J., Hu, H., Schwab, D.J., Hawley, N., and Yerubamdi, R. (2012), A modeling study of ice-water process for Lake Erie using coupled ice-circulation models, Journal of Great Lakes Research, 38(4), pp. 585-599, doi: 10.1016/j.jglr.2012.09.021.

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6. **Fujisaki (Manome), A.**, and Oey, L. (2011), Formation of ice bands by winds, Journal of Geophysical Research-Oceans, 116, C10015, 14 pages, doi:10.1029/2010JC006655.
5. Chang, Y-L, Oey, L, Lu, X, and Fujisaki (Manome) A, (2011), 2010 Oil Spill – trajectory projections based on ensemble drifter analyses, Ocean Dynamics, doi: 10.1007/s10236-011-0397-4.
4. **Fujisaki (Manome), A.**, Mitsudera, H., and Yamagushi, H. (2011), Dense Shelf Water formation process in the Sea of Okhotsk: Sensitivity study with a high-resolution ice-ocean coupled model, Journal of Geophysical Research, 116, C03005, 15 pages, doi:10.1029/2009JC006007.

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3. **Fujisaki (Manome), A.**, Yamaguchi, H., and Mitsudera, H. (2010), Numerical Experiment of air-ice drag coefficient and its impact on ice-ocean coupled system in the Sea of Okhotsk, Ocean Dynamics, 60 (2), pp. 377-394, DOI: 10.1007/s10236-010-0265-7.

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2. **Fujisaki (Manome), A.**, Yamaguchi, H., Toyota, T., Futatsudera, A., Miyanaga, M. (2009), Measurements of Air-Sea Drag Coefficient over the Ice-Covered Sea of Okhotsk, Journal of Oceanography, 65(4), pp.487-498, DOI: 10.1007/s10872-009-0042-8.

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1. **Fujisaki (Manome), A.**, Yamaguchi, H., Duan, F., and Sagawa, G. (2007), Improvement of Short-Term Sea Ice Forecast in the Southern Okhotsk Sea, Journal of Oceanography, 63(5), pp.775-790, DOI: 10.1007/s10872-007-0066-x.

Other publications (dataset, white paper, reports, non-refereed articles)

8. **Fujisaki-Manome, A.,** Seroka, G., Kelley, J., Pe'eri, S., Sienkiewicz, J., Feyen, J., Doty, O., Ide, K., Gramp, B., Ogden, F., Fanara, T., Myers, E., Moghimi, S., Cockerill, T., Wu, W., Anderson, E., Huelse, K., Forbes, C., Liu, Y., John, S., Di Lorenzo, E., Park, K., Wipperfurth, S., Sannikova, N., Titov, V., Wei, Y., Akan, C., Mani, S., Lindley, C.. Rivin, I. (2025), UFS Coastal Applications Team Report Round 2 Summary of a Unified Forecast System Model Evaluation for Marine Navigation, NOAA Technical Memorandum NOS 37/NWS05/OAR05, April 2025, https://repository.library.noaa.gov/view/noaa/69898.
7. **Fujisaki-Manome, A.**, David, C., King, K., (2024). Daily mean air temperature data for the North American Great Lakes based on coastal weather stations; 1897-2023 (NCEI Accession 0291722). NOAA National Centers for Environmental Information. Dataset. https://doi.org/10.25921/ws45-s314, Accessed on May 19, 2024.
6. Seroka, G., **Fujisaki-Manome, A,,** Kelley, J., Pe'eri, S., Sienkiewicz, J., Feyen, J., Doty, O., Ide, K., Gramp, B., Ogden, F., Fanara, T., Myers, E., Moghimi, S., Cockerill, T., Wu, W., Anderson, E., Huelse, K., Forbes, C., Liu, Y., John, S., Di Lorenzo, E., Park, K., Wipperfurth, S., Sannikova, N., Titov, V., Wei, Y., Akan, C., Mani, S., Lindley, C. (2024), UFS Coastal Applications Team Report Round 1 Summary of a Unified Forecast System Model Evaluation for Marine Navigation, NOAA Technical Memorandum NOS 36/NWS04/OAR04, May 2024, https://doi.org/10.25923/nws6-kx30.
5. Van der Westhuysen, A., Ogden, F., Flowers, T., Fanara T., Myers, E., Dean, C., Allen, A., Lindley, C., Zachery, B., **Fujisaki-Manome, A.,** Warner, J., Doran, K., Palmsten, M., Massey, C., Sanders, B., and He., R., Whitepaper on the development of a Unified Forecast System for Coastal Total Water Level prediction, Unified Forecast System (UFS) Coastal Application Team, Water Quantity Total Water Level Prediction Sub-application, *NOAA Technical Memorandum NOS*, *33*, 1–60. https://doi.org/https://doi.org/10.25923/170a-cv35.
4. Seroka, G., Kelley, J., Sienkiewicz, J., Seaton, C., Anderson, E.J., Allen, A., Forbes, C., **Fujisaki-Manome, A**., Haas, K.A., Lindley, C., Roman, D., and Weston, A. (2022), Unified Forecast System (UFS) Coastal Applications Team - Water Quantity Marine Navigation Sub-Application Tiger Team: Report, *NOAA Technical Memorandum*, *NOS*(34), 1–27. https://doi.org/https://doi.org/10.25923/x7zr-nj33.
3. **Fujisaki-Manome, A.,** D.G. Gill, T. Guo, E.J. Anderson, and M.C. Lemos, 2019: Knowledge Co-production in a Research-to-Operation (R2O) Process for Development of a Great Lakes Ice Forecast: Reflection from a Stakeholder Engagement Workshop, Earth and Space Science Open Archive, preprint, https://www.essoar.org/doi/abs/10.1002/essoar.10501135.1.
2. **Fujisaki-Manome, A.,** D.G. Gill, E.J. Anderson, T. Guo, and M.C. Lemos, 2019: Report on The Great Lakes Ice Forecast Workshop, Available from the University of Michigan Graham Sustainability Institute web site: https://graham.umich.edu/media/files/Great-Lakes-Ice-Forecast-Workshop-20191105.pdf
1. **Fujisaki-Manome, A**., Mitsudera, H., Wang, J., and Wakatsuchi, M., 2016. "How does the Amur River discharge flow over the northwestern continental shelf in the Sea of Okhotsk?", Contributions from ILTS, Hokkaido University. In Japanese.

Other research products

Model development

- Contributor to the Princeton Ocean Model (maintained by L. Oey at Princeton University). Developed ICEPOM by fully parallelizing Princeton Ocean Model with the message-passing-interface library, re-writing into Fortran 90, and coupling it to sea/lake ice processes.
- Contributor to the Finite Volume Community Ocean Model (maintained by C. Chen at

University of Massachusetts-Dartmouth). Updating its ice module for freshwater applications.

Invited Talks

17. Ayumi Fujisaki-Manome, U-M/CIGLR Arctic Programs to Understand the Changing Arctic Coastal Conditions, Michigan Arctic Forum III, Harrison Township, MI, October 30-31, 2025. (virtual presentation)
16. Ayumi Fujisaki-Manome, Monitoring and Modeling Capabilities at CIGLR, the International Joint Commission Science Advisory Board, Great Lakes Science Plan, Engagement #4 - Centers of Excellence & Workforce Development Hybrid Event, Ann Arbor, MI. April 9-10, 2025.
15. Ayumi Fujisaki-Manome, Haoguo Hu, David Cannon, Jia Wang, Overview of U-M/CIGLR Arctic Programs, Capabilities, and Needs, Michigan Arctic Forum II, The Michigan Economic Development, Alpena, MI, June 6, 2024.
14. 2023 Hydrographic Survey Review Panel Public Meeting, September 27-29, 2023, "Unified Forecast System (UFS) Coastal Applications Team HSRP Update", Invited presentation.
13. Department of Energy COMPASS workshop, September 19-20, 2023, "Modeling capability at CIGLR research institute to support decision making across different time scales". Invited presentation.
12. Great Lakes Interest Group, Electric Power Research Institute, Webcast on February 7, 2023, "Forecasting lake-/sea-effect snowstorms, advancement, and challenges". Invited online presentation.
11. Michigan Institute for Data Science Environmental Data Science Bootcamp, November 18, 2022, "Can machine learning models beat physics-based modeling? - Examples of waves and ice". Guest lecture.
10. CLasP department seminar, "Recently amplified interannual variability of the winter severity and ice cover over the North American Great Lakes in response to changing teleconnections" Climate and Space Sciences and Engineering Department, University of Michigan October 27th, 2022.
9. North American Ice Service Annual Meeting, August 22-25, 2022, Suitland MD, "Lake Ice Product from Great Lakes Operational Forecast System", Invited presentation at the Operational Product panel session.
8. The Unifying Innovations in Forecasting Capabilities Workshop, July 18-22, 2022, College Park, MD (hybrid meeting), "Academia and the UFS: Through the lens of ice modeling and its coastal applications", Invited presentation at the Academia and Unified Forecast System (UFS) session.
7. NOAA CoastWatch Monthly All hands meeting, January 20, 2022, "Great Lakes ice-hydrodynamic modeling research". Invited presentation.
6. U.S. and Canadian Coast Guards Icebreaking Conference, October 26, 2021. "Ice Model Development for Great Lakes Operational Forecast System", Invited presentation. Co-presenters: Fujisaki-Manome, A., Kessler, J., Kelley, J., Chen, Y., Rivin, I., Peng, M., Anderson, E..
5. North American Ice Service University session on May 10, 2021. "Ice Model Development and Verification for NOAA's Great Lakes Operational Forecast System (GLOFS)". *Invited presentation.*
4. The Integration Ocean Observing System and NOAA Oceanic and Atmospheric Research Workshop, October 6, 2020. "Overview of Current Collaborations and Year-Round Observations in the Great Lakes– Physics". *Invited presentation.*

3. Japan Geophysical Union-American Geophysical Union joint meeting, Makuhari, Chiba, Japan, May 20th-25th, 2017. "Turbulent Heat Fluxes during an Extreme Lake Effect Snow Event: Direct Measurements and Model Ensemble", *Invited presentation at session "High performance computing for next generation weather, climate, and environmental sciences using K",*
2. The 23rd International Association for Hydro-Environment Engineering and Research (IAHR) International Symposium on Ice, Ann Arbor MI, May 31-June 3, 2016. **"**Simulating hydrodynamics and ice cover in Lake Erie using an unstructured grid model", *Keynote Speech.*
1. Stevens Institute of Technology, November 21st, 2014, "Numerical Modeling of Coastal Ice-covered Waters: Toward better understanding of nearshore processes and forecast for hazard prediction", *Special Seminar.*

Other Talks

6. Wave in ice mini workshop at the University of Tokyo, "Understanding characteristic processes in Great Lakes' hydrodynamics, ice, and waves for improved operational short-term model predictions", July 9, 2024.
5. Seminar series at Japan Agency for Marine-Earth Science and Technology (JAMSTEC), "Ice-lake model development for climate research and operational coastal forecasts: Application to the Laurentian Great Lakes" April 19th, 2016
4. CLasP weekly seminar "Ice-ocean/lake model development for climate research and operational ice forecasts: Application to the Laurentian Great Lakes." Climate and Space Sciences and Engineering Department, University of Michigan November 19th, 2015
3. GLERL-CILER seminar series, "Impacts of ice cover on Lake Erie hydrodynamics, from a 3D ice-hydrodynamic coupled model", NOAA Great Lakes Environmental Research Laboratory, June 12th, 2013.
2. Conservation Ecology Seminar, "Changing Great Lakes ice cover under climate variability, its impacts on the coastal physics and its ecological implications", School of Natural Resources and Environment, University of Michigan, March 1, 2013.
1. GLERL-CILER seminar series, "Ice-lake models for Lake Erie: Sensitivity study for ice-water processes", NOAA Great Lakes Environmental Research Laboratory, April 19th, 2011.

Conference presentations

38. **Fujisaki-Manome, A.**, Doty, O., Kessler, J., and Titze, D., Enhancing Great Lakes Ice Modeling: Integration of CICE6 and the Unified Forecast System, 106th American Meteorological Society Annual Meeting, 24th Symposium on the Coastal Environment, Houston, TX, January 25-29, 2026.
37. **Fujisaki-Manome, A.,** NOAA Unified Forecast System Coastal Applications Team (UFS CAT) Model Evaluation, Unifying Innovations in Forecasting Capabilities Workshop, Boulder, CO, September 8-12, 2025. Virtual presentation. On behalf of a large group of collaborators.
36. **Fujisaki-Manome, A.,** Ader, V., Titze, D., Anderson, E.J., Lin, Y., Improving winter thermal structure modeling in large freshwater lakes, International Association for Great Lakes Research, Milwaukee, WI, June 2-6, 2025 (virtual oral presentation).
35. **Fujisaki-Manome, A.,** Hu, H. Wang, J. Westerink, J., Wirasaet, D., Ling G, Choi, M., Moghimi, S., Myers, E., Abdolali , A., Dawson C., Janzen. C., "Advanced sea ice modeling

for short-term forecasting for Alaska's coasts", Alaska Marine Science Symposium, Anchorage, AK, January 27-31, 2025.

34. **Fujisaki-Manome, A**., O. Doty, Kessler, J., and D. Titze, Enhancing Great Lakes Ice Forecasting: Integration of CICE6 and the Unified Forecast System, American Meteorological Society 23rd Symposium on the Coastal Environment, January 12-16, 2025.
33. **Fujisaki-Manome, A**., V. Ader, D. Titze, E. Anderson, Y. Lin, **Modeling thermal structure in large freshwater lakes**, 14th International Workshop for Modeling the Ocean, Sapporo, Japan, June 18, 2024.
32. **Fujisaki-Manome, A.,** Hu, H. Wang, J. Westerink, J., Wirasaet, D., Ling G, Choi, M., Moghimi, S., Myers, E., Abdolali , A., Dawson C., Janzen. C., "Advanced sea ice modeling for integration into a storm-surge, wave, and ice forecasting system for Alaska's coasts", American Meteorological Society 22nd Symposium on the Coastal Environment, January 28-February 1, 2024.
31. **Fujisaki-Manome, A.,** Kessler, J., and Anderson, E., "Advancing prediction capabilities of freshwater ice in large lakes by understanding and modeling their characteristic processes", American Geophysical Union Fall Meeting, San Francisco, December 11-15, 2023. Invited presentation (poster).
30. **Fujisaki-Manome, A.,** Y. Lin, J. Wang, Recently amplified interannual variability of the winter severity and ice cover over the North American Great Lakes in response to changing teleconnections, American Geophysical Union Fall Meeting, Chicago, IL, December 12-16, 2022.
29. **Fujisaki-Manome, A.,** "Using Observations for Great Lakes ice verification", Cross NOAA OAR Sea Ice Modeling Workshop, Boulder, CO, April 25-27, 2023.
28. **Fujisaki-Manome, A.**, Hu, H., Wang, J., Westerink, J., Wirasaet, D., Ling, G., Choi, M., Steffan, K., and Moghimi, S., "Advancing sea ice forecasts for Alaska's Coasts using CICE6 and coupling with ADCIRC and WW3 using NOAA Environmental Modeling System", NOAA General Modeling Meeting and Fair, April 13-16, 2021 (virtual)
27. **Fujisaki-Manome, A.** and Wang, J., Sea ice variability associated with nearshore-offshore water change in the Arctic marginal Seas, *Japan Geophysical Union-American Geophysical Union joint meeting 2020*, virtual meeting, May 20th-25th, 2020.
26. **Fujisaki-Manome, A.,** E.J. Anderson, J.A. Kessler, P.Y. Chu, J. Wang, and A.D. Gronewold, Simulating impacts of precipitation on ice cover and surface water temperature across large lakes, 2020 Ocean Sciences Meeting, San Diego, CA, 16-21 February 2020 (poster presentation).
25. **Fujisaki-Manome, A.**, G.E. Mann, E.J. Anderson, P.Y. Chu, L.E. Fitzpatrick, G.A. Lang, E.P. James, S.G. Benjamin, C. Alexander, J.G.W. Kelley, Y. Chen, and M. Rostaminia, Advancement of integrated winter weather forecasts in the Great Lakes region: Linking operational weather, lake, ice models, and user engagement, 2020 Americal Meteorological Society Annual Meeting, 10th Conference on Transition of Research to Operations, Boston, MA, January 12-16, 2020.
24. **Fujisaki-Manome, A.**, E.J. Anderson, J.A. Kessler, G.A. Lang, P.Y. Chu, J. Wang, J. Kelley, Y. Chen, and A. Zhang, Great Lakes Ice Forecast Model Development, the International Icebreaking Conference, U.S. Coast Guard, Cleveland OH, October 29-30, 2019.
23. **Fujisaki-Manome, A.**, E.J. Anderson, J.A. Kessler, G.A. Lang, J. Wang, and P. Chu,"Impacts of Precipitation on Ice Cover and Water Temperature in the Great Lakes", 62nd Annual Conference on Great Lakes Research, International Association for Great Lakes Research, Brockport NY, June 10-14, 2019.

22. **Fujisaki-Manome, A.**, E.J. Anderson, J.A. Kessler, G.A. Lang, J. Wang, and P. Chu, Impacts of Sensible Heat from Precipitation on Ice Cover in Large Lakes, AGU Fall meeting, Washington D.C., December 10th-14th, 2018.
21. **Fujisaki-Manome, A.**, A.D. Gronewold, B.M. Lofgren, E.J. Anderson, L. Fitzpatrick, P. Blanken, C. Spence, J.D. Lenters, C. Xiao, U. Charusombat, Validating modeled turbulent heat fluxes across large freshwater surfaces, AGU Fall meeting 2017, New Orleans, LA, December 11th-15th, 2017 (poster).
20. **Fujisaki-Manome, A**., J. Wang, and E.J. Anderson, Modeled ice thickness in Lake Erie with different parameterizations of the ice strength, JpGU-AGU joint meeting 2017, Makuhari, Chiba, Japan, May 20th-25th, 2017 (poster).
19. **Fujisaki-Manome, A.**, J. Wang, and E.J. Anderson, Modeled ice thickness in Lake Erie with different parameterizations of the ice strength, Conference of International Association for Great Lakes Research, Detroit, MI, May 15-19, 2017.
18. **Fujisaki-Manome**, **A.**, Reconstructing turbulent heat fluxes over Lake Erie using an unstructured grid model – extreme lake effect snow, FVCOM Users Workshop 2016, Bedford Institute of Oceanography, October 18-20, 2016
17. **Fujisaki-Manome, A.** and J. Wang, Simulating sea ice in the Arctic Ocean and Eastern Siberian Sea The 23rd International Association for Hydro-Environment Engineering and Research (IAHR) International Symposium on Ice, Ann Arbor MI, May 31-June 3, 2016.
16. **Fujisaki-Manome, A.**, and J. Wang, Simulating hydrodynamics and ice cover in Lake Erie using an unstructured grid model, 8th International Workshop on Modeling Ocean, Bologna, Italy, June 6-10, 2016.
15. **Fujisaki-Manome, A.** and J. Wang, Simulating hydrodynamics and ice cover in Lake Erie using an unstructured grid model, American Geophysical Union, Ocean Sciences Meeting, New Orleans, LA, February 21-26, 2016. (poster)
14. **Fujisaki-Manome, A.**, J. Wang, and D. Hall, Ice-hydrodynamic simulation with data assimilation of satellite-derived ice surface temperature, Conference of International Association for Great Lakes Research, Burlington, VT, May 25-29, 2015.
13. **Fujisaki (Manome), A.,** J. Wang, and X. Bai, Ice-hydrodynamic coupled simulation in Lake Erie with FVCOM, Conference of International Association for Great Lakes Research, Hamilton, ON, May 26-30, 2014.
12. **Fujisaki (Manome), A.**, J. Wang, X. Bai, G. Leshkevich, and B. Lofgren, Model-simulated interannual variability of Lake Erie ice cover, circulation, and thermal structure in response to atmospheric forcing, 2003-2012, Conference of International Association for Great Lakes Research, West Lafayette, IN, June 2-6, 2013.
11. **Fujisaki (Manome), A.**, J. Wang, and D. Schwab, Interannual variability of ice cover, circulation, and thermal structure in Lake Erie from 2003 to 2012, Workshop on Methods of Projecting Hydrologic Impacts of Climate Change, NOAA/GLERL Lake Michigan Field Station, Muskegon, MI, August 27-29, 2012 (poster).
10. **Fujisaki (Manome), A.**, J. Wang, D. Schwab, Interannual variability of ice-circulation coupled system in Lake Erie, Conference of International Association for Great Lakes Research, Cornwall, Ontario, Canada, May 13-17, 2012.
9. **Fujisaki (Manome), A.**, H. Mitsudera, and M. Wakatsuchi, Ice-Ocean coupled model with 1 km grids to study the dense shelf water transport in the Sea of Okhotsk, Ocean Sciences Meeting, American Geophysical Union, Salt Lake City, Utah, US, February 20-24, 2012 (poster).
8. **Fujisaki (Manome), A.**, J. Wang, H. Hu, and D. Schwab, Comparison of ice-ocean models

for Lake Erie, Conference of International Association for Great Lakes Research, Duluth, Minnesota, USA, May 30 – June 3, 2011.

7. **Fujisaki (Manome), A.**, and L. Oey, Generation mechanism of ice bands and their grid size dependence, Western Pacific Geophysical Meeting, American Geophysical Union, Taipei, Taiwan, June 22-25, 2010.
6. **Fujisaki (Manome), A.**, and L. Oey, Coupled response to wind on small-scale ice and ocean features; How are ice-bands formed?, Ocean Sciences Meeting, American Geophysical Union, Portland, Oregon, US, February 22-26, 2010. (poster).
5. **Fujisaki (Manome), A.**, H. Yamaguchi, H. Mitsudera, Investigation of ice-ocean coupled system in the Sea of Okhotsk using a numerical model, Proc. International Workshop on Modeling the Ocean: Dynamics, Systheses and Prediction, Taipei, Taiwan, Feb. 23-26, 2009, pp. 37.
4. **Fujisaki (Manome), A.**, H. Yamaguchi, and H. Mitsudera, Investigation of ice-ocean coupled system in the Sea of Okhotsk using a numerical model, Proc.24th International Symposium on Okhotsk Sea & Sea Ice, Mombetsu, Hokkaido, Feb. 15-18, 2009, pp. 97-100.
3. **Fujisaki (Manome), A.**, H. Yamaguchi, and G. Sagawa, Numerical study of the Sea of Okhotsk with a high-resolution ice-ocean model, Proc.23rd International Symposium on Okhotsk Sea & Sea Ice, Mombetsu, Hokkaido, Feb. 16-22, 2008, pp.46-49.
2. **Fujisaki (Manome), A.**, H. Yamaguchi, T. Toyota, A. Futatsudera, and M. Miyanaga, Measurements of Turbulent Fluxes over Sea Ice Region in the Sea of Okhotsk, Proc.CD American Geophysical Union Fall Meeting, San Francisco, Dec. 10-14, 2007, Paper No. C21A-0064, 1p..(poster)
1. **Fujisaki (Manome), A.**, H. Yamaguchi, F. Duan, and G. Sagawa, Improvement of Short-term Numerical Sea Ice Forecasting in the Southern Okhotsk Sea, The 16th International Offshore and Polar Engineering Conference, San Francisco, CA, 2006, pp. 591-598.

Select Media Contributions

25. Interlochen Public Radio, New ice cover data offers insight into whitefish declines, climate change, https://www.interlochenpublicradio.org/ipr-news/2026-02-04/new-ice-cover-data-offers-insight-into-whitefish-declines-climate-change, February 4, 2026
24. Great Lakes Now, Sorting Fish and a Breakaway Buoy, https://www.youtube.com/watch?v=K26HquLB5bg, January 26, 2026.
23. Grist, Yes, climate change can supercharge a winter storm. Here's how., https://grist.org/climate/yes-climate-change-can-supercharge-a-winter-storm-heres-how/, January 23, 2026.
22. Milwaukee Journal Sentinel, Oh buoy! Runaway research buoy gets data on Great Lakes winter waves, https://www.jsonline.com/story/news/environment/2025/12/08/rogue-buoy-gathers-first-data-on-winter-ice-waves-in-lake-michigan/86967904007/, December 16, 2025
21. Milwaukee Journal Sentinel, "Landmark study finds Great Lakes have entered a new era with climate change, extreme events", https://www.jsonline.com/story/news/local/2025/05/28/more-extreme-heat-cold-on-way-at-great-lakes-has-see-more-extremes-of-hot-cold-due-to-climate-change/83797865007/, May 28, 2025.
20. The Daily News by Capital News Service, "Budget cuts threaten Great Lakes weather forecasting", https://www.ironmountaindailynews.com/news/local-news/2025/05/budget-cuts-threaten-great-lakes-weather-forecasting/, May 5, 2025.
19. Michigan News, "2024 global temperature, climate assessment: U-M experts available to

comment", https://news.umich.edu/2024-global-temperature-climate-assessment-u-m-experts-available-to-comment/, January 10, 2025

18. Michigan News, "U-M research forecasts warmer, rainier winter storms ahead for Great Lakes region", https://news.umich.edu/u-m-research-forecasts-warmer-rainier-winter-storms-ahead-for-great-lakes-region/, August 22, 2024
17. Environmental Monitor, Predicting and Monitoring Ice Weather Events: The Great Lakes Approach to Ice Research, https://www.fondriest.com/news/predicting-and-monitoring-ice-weather-events-the-great-lakes-approach-to-ice-research.htm, August 19, 2024
16. Media interview, "Climatologist talk lack of ice on Great Lakes and its meaning moving forward", WDIV-TV Detroit, March 8, 2024, https://www.clickondetroit.com/video/news/2024/03/08/climatologist-talk-lack-of-ice-on-great-lakes-and-its-meaning-moving-forward/?utm_source=facebMook&utm_medium=social&utm_campaign=snd&utm_content=tutman&fbclid=IwAR3wGv77Q3a_Gs8z85L5BTFJhBRGBRjOXNt6Kyu_exELZMLBpAc9aHz-P3M
15. Media interview, "Experts report record low Great Lakes ice coverage", Michigan Advance, March 1, 2024, https://michiganadvance.com/2024/03/01/experts-report-record-low-great-lakes-ice-coverage/
14. Detroit News, interviewed for "Warm winter upends Black Lake sturgeon season, leaving Great Lakes with little ice cover", February 2, 2024, https://www.detroitnews.com/story/news/local/michigan/2024/02/02/dnr-cancels-black-lake-sturgeon-season-low-ice/72449310007/
13. Climate Central, an expert contact at Climate Matters, Great Lakes Ice, February 7, 2024, https://www.climatecentral.org/climate-matters/great-lakes-ice-2024.
12. Michigan Radio, interviewed for "*Ice cover on the Great Lakes hits a 50-year low*", February 15, 2023, https://www.michiganradio.org/environment-climate-change/2023-02-15/ice-cover-on-the-great-lakes-hits-a-50-year-low.
11. The Weather Channel, interviewed to comment about record low ice cover in the Great Lakes and its implications, February 10, 2023.
10. Milwaukee Journal, interviewed for "It's mid-January and the Great Lakes are virtually ice-free. That's a problem.", January 19, 2023, https://www.jsonline.com/story/news/2023/01/19/lack-of-ice-upends-great-lakes-food-web-incites-algae-blooms/69813953007/.
9. Detroit Public TV, Great Lakes Now "*Shrinking Winter - Great Lakes Now - Episode 2202*", February 2022, https://www.youtube.com/watch?app=desktop&v=TgTtZ2aRZ74&feature=youtu.be.
8. Grist, "*The Midwest defined itself by its winters. What happens when they disappear?*", February 16, 2022, https://grist.org/culture/the-midwest-defined-itself-by-its-winters-what-happens-when-they-disappear/.
7. Bridge Michigan, "*Four ways Great Lakes winters are changing as scientists search for clues*", February 9, 2022, https://www.bridgemi.com/michigan-environment-watch/four-ways-great-lakes-winters-are-changing-scientists-search-clues.
6. Nowcast 'Papers of Note' in the Bulletin of the American Meteorological Society, "*Better Forecasts for Lake-Effect Snow*", 101(12), December 2020, pages 1053-1054, highlighting the publication #16 (Fujisaki-Manome et al., 2020, *J. Hydrometeorology*).
5. The Cordova Times, "Researchers aim to improve coastal storm surge forecasting", October 4, 2020. https://www.thecordovatimes.com/2020/10/04/researchers-aim-to-improve-coastal-

storm-surge-forecasting/

4. CIGLR Winter 2018 Newsletter, Featured Research, "Forecasting the Future of Lake Effect Snow", February 28, 2018. https://mailchi.mp/9bd0701ee886/ciglr-enews-winter-2018?e=a4bd7b8868
3. *The Buffalo News*, "Better lake-effect forecasts are coming", November 24, 2017. http://buffalonews.com/2017/11/24/don-paul-better-lake-effect-forecasts-are-coming/ The publication #11 (Fujisaki-Manome, et al., 2017, J. Hydrometeorology) is quoted.
2. Great Lakes Echo, "*Imagine a Great Lakes weather forecaster who's always right*", November 20, 2017. http://greatlakesecho.org/2017/11/20/imagine-a-great-lakes-weatherman-whos-always-right/.
1. The Ship & Ocean Newsletter, Ocean Policy Research Foundation, No. 277., Fujisaki (Manome), A., 2012. "*Research* to Restore the Environment of the U.S. Great Lakes", In Japanese. (Brief introduction of the Great Lakes environmental background and relation to my research.)

Professional Service

- *Co-lead of the Unified Forecast System Coastal Application Water Quantity Navigation model evaluation effort, 2022-present.*

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- *Postdocs/Students Mentoring*

  Postdocs

4. Hazem Abdelhady, Postdoc Fellow, investigation of the Great Lakes climate variability, supported by the National Science Foundation, starting in May 2024.
3. David Cannon, CIGLR Postdoctoral Fellow, investigation of changes in Great Lakes thermal structure related to climate warming by hydrodynamic-ice model simulations, 2022-2023, now Assistant Research Scientist at CIGLR.
2. Abby Hutson, CIGLR Postdoctoral Fellow, Optimal Atmospheric Model Configuration for Use in a Great Lakes Basin Regional Climate Model, 2021-2023, now Assistant Research Scientist at CIGLR.
1. Yuchun Lin, CIGLR Postdoctoral Fellow, Climate Analysis on Great Lakes ice cover and winter severity; lake mixing research using the ice-hydrodynamic model, 2019-2021, now Assistant Professor at National Taiwan Ocean University.

Students

18. Jinning Lin (School for Environment and Sustainability, University of Michigan), Impact of ENSO diversity on Great Lakes local extremes, master's thesis. December 2025-present.
17. Serena Felix (School for Environment and Sustainability, University of Michigan), Understanding nearshore ice stability in response to changing oceanic conditions, master's thesis. December 2025-present.
16. Amari Dupree (University of Maryland Eastern Shore), "Hydrodynamic-ice impacts on sediment plume and turbidity events in the southern basin of Lake Michigan", Great Lakes summer fellowship, May-August 2024.
15. Khush Bafna (University of Michigan, Program in Environment), "Analysis of daily air temperature record from 1897 to 2023", student research assistantship, January 2024 – April 2024.

14. Olivia Doty, (CLaSP, U. Michigan, “Assisting the model evaluation effort of the UFS Coastal Applications Water Quantity navigation sub-application”, student research assistantship, December 2022-2023. Now a research assistant at CIGLR.
13. Vincent Ader (SEAS, U. Michigan), “Great Lakes hydrodynamic-ice modeling”, student research assistantship, January 2023-present.
12. Linfeng Li (SEAS, U. Michigan), “Using ICESat-2 to fill a data gap of Great Lakes winter wave measurements”, student research assistantship, March 2022-February 2024. Now at a Ph.D. student at U-M.
11. Ryan Glassman (Valparaiso Unviersity), “Great Lakes Winter Storm Analysis”, Great Lakes summer fellowship, May-August 2022.
10. Pradip Shrestha, Justin Huber, Lucas Vanderbilt, Andrew Nowicki (U. of Michigan), "Evaluation of impacts of climate change on ecosystem services across the Great Lakes region", Master's project, School for Environment and Sustainability. December 2020-April 2022. Co-advisor with Subba Rao Chaganti (lead), Michael Fraker, Casey Godwin, Runzi Wang.
9. Lian Liu, Danielle Cohn, Inigo Peng, Miye Nakashima, Santhi Davedu (SEAS, U. of Michigan), the master’s project “Great Lakes Ice Cover: Enriching Database and Improving Forecast”, January 2020 – May 2021.
8. Raymond Surya (U. of Michigan), Stakeholder engagement project of Great Lakes ice forecast, January 2019-May 2019.
7. Clay Carufel (U. Minnesota-Duluth), Ice model/data analyses for the Alaska’s coasts, Great Lakes summer fellowship, May-August 2019
6. Yin Min Goh (U. of Michigan), Assessing precipitation impacts on Great Lake ice cover, Undergraduate Research Opportunity Program (URIP), September 2018-May 2019.
5. Kyle Klein (CLaSP, U. of Michigan), Meteorological data analysis for lake effect snow forecasts, CLIMATE/SPACE 701 (Special Problems in Meteorology and Oceanography) and summer project, co-mentored by Frank Marsik (CLaSP), September 2017-August 2018.
4. Peiyun Zhu (CLaSP, U. of Michigan), Hydrodynamic data analysis, May-July 2017
3. Logan Lee (U. of North Dakota), Analysis of vessel based meteorological data, Great Lakes summer fellowship, May-August 2016
2. Trent Frey (U. of Michigan), Meteorological data analysis, Great Lakes summer fellowship, May-August 2015
1. James Kessler (U. of Michigan), Radiative transfer modeling of Great Lakes ice cover, Great Lakes summer fellowship, May-August 2015

- *Journal reviewer*

International Journal of Digital Earth, Earth’s Future, Journal of Advances in Modeling Earth Systems, Nature Communications, Earth and Space Science, Hydrology and Earth System Sciences, IEEE Geoscience and Remote Sensing Letters, Geophysical Research Letters, Journal of Geophysical Research, Progress in Oceanography, Natural Hazards, PLOS ONE, Water Resources Research, Journal of Atmospheric and Oceanic Technology, Journal of Oceanography, Ocean Dynamics, Polar Research, Hydrology Research, Canadian Journal of Civil Engineering, Journal of Great Lakes Research

- *Proposal reviewer*

Minnesota Sea Grant, National Science Foundation, NOAA Small Business Innovation Research Program, Michigan Institute for Data Science, CIGLR postdoctoral fellowship, CIGLR graduate

fellowship, CIGLR summit/working group, Graham Sustainability Institute

- *Invited participants in the NSF-funded Coastlines and People (CoPe) Scoping Session* in Chicago Sept. 26-28, 2018.

- *Conference organization*

7. Session co-chair, "Coastal Modeling and Evaluation for the Unified Forecast System (UFS) and Other Applications" at the Symposium on the Coastal Environment of the American Meteorological Society annual meeting, 2024-present.
6. Co-organized a NOAA workshop for Sea Ice Modeling in Boulder, CO, April 25-27, 2023.
5. Co-organized a stakeholder/expert workshop for Great Lakes Center of Expertise in Oil Spill Issues, Ann Arbor, MI (hybrid), September 20-21, 2022.
5. Co-organizer, CIGLR Summit on Under-Ice Oil Spill at Lake Superior State University, Sault Ste. Marie, MI, March 2022.
4. Local Organization Committee member for the 12th International Workshop on Modeling the Ocean, Ann Arbor MI, June 2022.
3. Lead organizer, Great Lakes ice forecast stakeholder workshop, Cleveland, OH on July 11, 2019.
2. Local committee member (Secretariat) for the International Association for Hydro-Environment Engineering and Research (IAHR), International Symposium on Ice 2016 (Ann Arbor, MI, May 31st-June 3rd)
1. Session convener, 2010 Western Pacific Geophysics Meeting, "Multiscale Interactions in Ocean: Small-scale Processes, Air-ice-ocean Interactions, Impacts on Large-scale prediction." (co-convener: Humio Mitsudera)

- *Informal modeling consultant for students and postdocs*

Outside the funded research projects, I am routinely consulted with by students, postdocs, and professional scientists in Hokkaido University, the University of Tokyo, University of Toronto, and University of São Paulo, Japan Agency for Marine-Earth Science and Technology (JAMSTEC) who apply FVCOM and ICEPOM (the ice-ocean modeling codes that I have contributed to) to regional oceans and process studies. Providing technical and scientific advice upon request.

Membership

American Geophysical Union, The Oceanographic Society of Japan, American Meteorological Society, International Association for Great Lakes Research

Experience of Studying outside U.S. and Japan

Received funding from the University of Tokyo to visit Institute for Atmosphere and Climate, ETH Zurich, Switzwerland (Advisor, Prof. Atsumu Ohmura), Oct.-Nov. in 2006 and Jan. in 2007. Conducted literature review on ice-ocean interaction processes and formulated a review write-up.

Field experience

2. Buoy measurement of wave conditions on lake ice in collaboration with CIGLR colleagues, 2024-present.
1. The measurement of the air-ice drag coefficient in the Sea of Okhotsk with the eddy covariance method (Peer-reviewed paper #2) in a cruise of the Patrol Vessel Soya, Japan

Coast Guard, in February 2005.

Language
Japanese (native), English