Zhilong Liu

Research Assistant Professor

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EDUCATION

2021	Ph. D.	Civil and Environmental Engineering	University of Maine
2015	M. S.	Naval Architecture and Ocean Engineering	Tianjin University, China
2012	B. S.	Naval Architecture and Ocean Engineering	Tianjin University, China

PROFESSIONAL APPOINTMENTS

2023 - present	Research Assistant Professor	University of South Alabama
2020 - 2023	Postdoc Research Associate	University of South Alabama, Dauphin Island Sea Lab

PUBLICATIONS

Liu, Z., Lehrter, J., Dzwonkowski, B., Lowe, L. L., Coogan, J., 2022. Using dissolved oxygen variance to investigate the influence of nonextreme wind events on hypoxia in Mobile Bay, a shallow stratified estuary, *Frontiers in Marine Science.*

Dzwonkowski, B., Fournier, S., Lockridge, G., Coogan, J., **Liu, Z.**, Park, K., 2022. Hurricane Sally (2020) shifts the ocean thermal structure across the inner core during rapid intensification over the shelf. *Journal of Physical Oceanography.*

Dzwonkowski, B., Fournier, S., Lockridge, G., **Liu, Z.,** Coogan, J., Park, K., 2021. Cascading weather events amplify the coastal thermal conditions prior to the shelf transit of Hurricane Sally (2020), *Journal of Geophysical Research: Oceans.*

Liu, Z., Huguenard, K., 2020. Hydrodynamic response of a floating aquaculture farm in a low inflow estuary, *Journal of Geophysical Research: Oceans.*

Bricknell, I., Birkle, S, Van Kirk. T., Hamlin, H., Duffy, K., Brawley, S., Capistrant-Fossa, K., Hugenard, K., Byron, C., Van Walsum, G. P., **Liu, Z.**, Zhu, L., Johnston, T., Grebe, G., Taccardi, E., Miller, M., Preziosi, B., Brady, D., Bowden, T., Quigley, C., Moeykens, S., 2020. Cold water aquaculture resilience, a review of the impact of likely scenarios in a climate change vulnerable ecological system. *Review in Aquaculture*.

Lieberthal, B., Huguenard, K., Ross, L., **Liu, Z.**, 2019. Intratidal Variability of Water Quality in the Damariscotta River, Maine. *Water*, 11(12), 2603.

Chen, H., Zou, Q., **Liu, Z**. 2017. A coupled RANS-VOF and finite element model for wave interaction with highly flexible vegetation. *Coastal Engineering Proceedings*, 1(35), 25.

PATENT

Li, Y., **Liu, Z**., 2015, Patenting “Finite element pro-process system and method for umbilical”.

RESEARCH GRANTS AND FUNDING

2023 Infrastructure integrity assessment of floating cage oyster farms in the northern Gulf of Mexico, Mississippi-Alabama Sea Grant Consortium (MASGC), February 2025 - January 2026, co-PI with Shenghua Wu and Brian Dzwonkowski, Total $197,119.

AWARDS AND HONORS

2022	Outstanding Young Scientist Award (2nd place), 12th International Workshop on Modeling the Ocean
2017	Phi Kappa Phi Award, University of Maine
2015	Excellent Postgraduates of Tianjin University
2014	China Classification Society Scholarships
2013	Bureau Veritas Scholarships
2012	Excellent Undergraduates of Tianjin University
2009-2011	National Inspirational Scholarships
2009-2011	Merit Student of Tianjin University

SELECTED CONFERENCE PRESENTIONTS AND POSTERS

Liu, Z., Lehrter, J., Dzwonkowski, B., Lowe, L., 2023. Influences of Future Changes in Watershed on Estuarine Hydrography: a case study of Wolf-Perdido Bay, *2023 Bays and Bayous Symposium*.

Liu, Z., Lehrter, J., Dzwonkowski, B., Lowe, L., 2022. Development of A Cross-scale Hydrodynamic Model for Perdido Bay, *Alabama Water Resources Conference 2022*.

Liu, Z., Lehrter, J., Dzwonkowski, B., Lowe, L. L., Coogan, J., 2022. Influence of Wind on Stratification and Mixing in Mobile Bay, Alabama, a Wide Microtidal Estuary, *12th International Workshop on Modeling the Ocean*

Liu, Z., Lehrter, J., Dzwonkowski, B., Lowe, L. L., Coogan, J., 2022. Physical-biogeochemical response to climate change in Mobile Bay, Alabama, *The Gulf of Mexico Conference (GoMCon) 2022.*

Liu, Z., Lehrter, J., Dzwonkowski, B., Lowe, L. L., Coogan, J., 2021. Towards Comprehensive Ecosystem Modeling in Response to Climate Change in Mobile Bay, Alabama, *AGU Fall Meeting 2021*.

Liu, Z., Dzwonkowski, B., Lehrter, J., Lowe, L. L.,2021. Role of Local Mixing on System Stratification: Impact of Tidal Inlets in Mobile Bay, AL, *Coastal & Estuarine Research Federation (CERF) 26th Biennial conference 2021.*

Liu, Z., Dzwonkowski, B., Lehrter, J., Ralston, D., Lowe, L., Coogan, J., 2020. Physical-biogeochemical response to climate change and sea level rise in the Mobile Bay, Alabama, *Poster, AGU Fall Meeting 2020*.

Liu, Z., Huguenard, K., Lauren, R., 2019. Analytical investigation of aquaculture farm impacts on estuarine dynamics, *2019 Northeast Aquaculture Conference & Exposition and the 38th Milford Aquaculture Seminar.*

Liu, Z., Huguenard, K., Lauren, R., 2018. Analytical investigation of aquaculture farm impacts on estuarine tidal and subtidal Flow, *Physics of Estuaries and Coastal Seas Meeting 2018.*

Liu, Z., Huguenard, K., 2017. Estimation of aquaculture farm drag coefficients based on momentum sink method, *2017 Northeast Aquaculture Conference & Exposition and the 37th Milford Aquaculture Seminar.*

Liu, Z., Huguenard, K., 2017. Estimation of aquaculture farm drag coefficients based on momentum sink method, *Aquaculture America 2017.*

Liu, Z., Huguenard, K., 2017. Experimental and Numerical Investigation of Wave Reduction by Floating Oyster Farms, *Coastal & Estuarine Research Federation (CERF) 24th Biennial conference 2017.*

TEACHING

2022	Undergraduate Guest Lecture "*The Wave in The Ocean*", Texas A&M University Corpus Christi
2019 - 2020	Undergraduate MAT127 Calculus II recitations, Department of Mathematics & Statistics, University of Maine

GRADUATE STUDENTS ADVISED

2023 - present	Chris Mikolaitis	Ph.D. Committee
2023 - present	Devanarayana Rao	Ph.D. Committee
2022 - present	Aravind Puzhankara	Ph.D. Committee
2022 - present	Harikrishnan Sreeshylam	Ph.D. Committee

UNDERGRADUATE ADVISED

2019	Dylan Schlichting	Civil and Environmental Engineering, University of Maine

PROFESSIONAL SERVICE

2020 – present	Manuscript reviewer	*Journal of Physical Oceanography, Ocean Modelling* *Estuarine, Coastal and Shelf Science,* *Journal of Hydrologic Engineering* *Frontiers in Marine Science, PLOS ONE*
2023	Proposal reviewer	Mississippi-Alabama Sea Grant Consortium (MASGC)