

Fei Da  
*Curriculum Vitae*

Postdoctoral Research Associate, Princeton University/NOAA Geophysical Fluid Dynamics Lab  
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**(a) Education:**

- 2018-2023 *Ph.D.* in Marine Science, Virginia Institute of Marine Science, William & Mary, VA  
- Dissertation title: *Chesapeake Bay carbonate cycle: past, present and future*
- 2015-2018 *M.S.* in Marine Science, Virginia Institute of Marine Science, William & Mary, VA  
- Thesis title: *Impacts of atmospheric nitrogen deposition and coastal nitrogen fluxes on oxygen concentrations in Chesapeake Bay*
- 2011-2015 *B.S.* in Oceanographic Science, Nanjing University, China  
- Thesis title: *Using hydrochloric-acid-soluble Sr/Ba ratio as a tracer for marine and terrestrial environment determination*
- 2019.07-2019.08 Estuarine & Coastal Fluid Dynamics *Summer School*, Friday Harbor Laboratories, University of Washington, WA  
- Report title: *Tides, mixing, and exchange in the San Juan Channel, WA*  
(By S. Brenner, J. Chen, **F. Da**, A. Hager, and J. Jacobsen)

**(b) Research Interests:**

Interactions between physical and biogeochemical processes within marine ecosystems; impacts of local human activities and global climate change on marine ecosystems; numerical modeling and data analyses.

**(c) Professional Experience:**

- 2023-present Postdoctoral Research Associate, Princeton University/NOAA Geophysical Fluid Dynamics Laboratory

**(d) Teaching Experience:**

- Fall 2021 **Teaching Fellow** (independently designed and taught a course), William & Mary, *Ocean and Coastal Acidification*, 15 undergraduate students

**(e) Publications:**

*Manuscripts in progress:*

- Da, F.**, Friedrichs, M.A.M., St-Laurent, P., Najjar, R.G., Shadwick, E.H., & Rivest, E. B. *Estuarine carbonate system variability: responses to extreme river discharge events and future climate change*. In preparation.
- Da, F.**, Friedrichs, M.A.M., St-Laurent, P., Najjar, R.G., Shadwick, E.H., & Stets, E. (2023). *Controls on the carbonate system of a coastal plain estuary: rivers, tidal wetlands, and tidal cycles*. *Estuaries and Coasts*. Under review.

*Peer reviewed publications*

- Da, F.**, Friedrichs, M.A.M., St-Laurent, P., Shadwick, E.H., Najjar, R.G., & Hinson, K. (2021). *Mechanisms driving decadal change in the carbonate system of a coastal plain estuary*. *JGR: Oceans*, 126(6), e2021JC017239. <https://doi.org/10.1029/2021JC017239>
- Da, F.**, Friedrichs, M.A.M. & St-Laurent, P. (2018). *Impacts of atmospheric nitrogen deposition and coastal nitrogen fluxes on oxygen concentrations in Chesapeake Bay*. *JGR: Oceans*, 123(7), 5004-5025. <http://doi.org/10.1029/2018JC014009>

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- Hinson, K., Friedrichs, M.A.M., St-Laurent, P., **Da, F.**, & Najjar, R.G. (2021). *Extent and Causes of Chesapeake Bay Warming*. JAWRA. <https://doi.org/10.1111/1752-1688.12916>
- Herrmann, M., Najjar, R.G., **Da, F.**, Goldberger, S., Friedman, J.R., Friedrichs, M.A.M., Menendez, A., Shadwick, E.H., Stets, E.G. & St-Laurent, P. (2020). *Challenges in quantifying air-water carbon dioxide flux using estuarine water quality data: Case study for Chesapeake Bay*. JGR: Oceans, 125, e2019JC015610. <https://doi.org/10.1029/2019JC015610>
- Friedman, J.R., Shadwick, E.H., Friedrichs, M.A.M., Najjar, R.G., DeMeo, O.A., **Da, F.** & Smith, J. (2020). *Seasonal variability of the CO<sub>2</sub> system in a large coastal plain estuary*. JGR: Oceans, 125 (1). <https://doi.org/10.1029/2019JC015609>
- Shadwick, E.H., Friedrichs, M.A.M., Najjar, R.G., DeMeo, O.A., Friedman, J.R., **Da, F.** & Reay, W.G. (2019). *High-frequency CO<sub>2</sub>-system variability over the winter-to-spring transition in a coastal plain estuary*. JGR: Oceans, 124 (11), 7626-7642. <https://doi.org/10.1029/2019JC015246>
- Signorini, S.R., Mannino, A., Friedrichs, M.A.M., St-Laurent, P., Wilkin, J., Tabatabai, A., Najjar, R.G., Hofmann, E.E., **Da, F.**, Tian, H., & Yao, Y. (2019). *Estuarine dissolved organic carbon flux from space: with application to Chesapeake and Delaware Bays*. JGR: Oceans, 124 (6), 3755-3778. <https://doi.org/10.1029/2018JC014646>
- Irby, I.D., Friedrichs, M.A.M., **Da, F.** & Hinson, K.E. (2018). *The competing impacts of climate change and nutrient reductions on dissolved oxygen in Chesapeake Bay*. Biogeosciences, 15, 2649-2668. <https://doi.org/10.5194/bg-15-2649-2018>

**(f) Selected first-author oral/poster presentations from last two years:**

- Da, F. (Invited participant)** *Chesapeake Bay carbonate cycle*. Dissertation symposium in Chemical Oceanography. Oral presentation, October 2022, Kona, HI.
- Da, F.**, Friedrichs, M.A.M., St-Laurent, P., Shadwick, E., Rivest, E., & Najjar, R.G. *Controls on the York River carbonate system and the impacts of extreme freshwater events*. Ocean Sciences Meeting. Oral presentation, February 2022, Gloucester Point, VA.
- Da, F.**, Friedrichs, M.A.M., St-Laurent, P., Shadwick, E., Najjar, R.G., & Hinson, K. *Mechanisms driving decadal changes in the carbonate system of a coastal plain estuary*. ASLO 2021 Aquatic Sciences Meeting. Oral presentation, June 2021, Gloucester Point, VA.
- Da, F.**, Friedrichs, M.A.M., Bever, A., St-Laurent, P., Musick, S., & Hudson, K. *The Chesapeake Bay Environmental Forecast System*. Ocean Carbon Biogeochemistry Summer Workshop. Poster and lightening presentation, June 2021, Gloucester Point, VA.
- Da, F.**, Friedrichs, M.A.M., St-Laurent, P., & Shadwick, E. *Controls of the diel variability in the York River carbonate system*. York River and Small Coastal Basins Symposium. Poster presentation, May 2021, Gloucester Point, VA.
- Da, F.** & Friedrichs, M.A.M. *Chesapeake Bay Water Quality: From Short-term Forecasts to Long-term Trends*. Hooked on Ocean Acidification Mini-Series. Oral presentation, March 2021, Gloucester Point, VA.
- Da, F.**, Friedrichs, M.A.M., St-Laurent, P., Shadwick, E., Najjar, R.G. *Chesapeake Bay acidification: relative impacts of long-term local and global stressors*. Goldschmidt Virtual Conference. Oral presentation, June 2020, Gloucester Point, VA.
- Da, F.**, Friedrichs, M.A.M., St-Laurent, P., Shadwick, E., Najjar, R.G. *Primary stressors impacting the long-term variability of the Chesapeake Bay carbonate system*. Ocean Sciences Meeting. Oral presentation, February 2020, San Diego, CA.

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**(g) Honors, Awards, and Grants:**

- Oct. 2022 Travel Award, 28<sup>th</sup> Dissertation Symposium in Chemical Oceanography, funded by NSF and NOAA
- Apr. 2022 2022 Editors' Citation for Excellence in Refereeing, Journal of Geophysical Research: Oceans, American Geophysical Union
- 2021-2022 TOGA Student Fellowship, VIMS
- Mar. 2021 International Student Achievement Award, William & Mary
- 2020-2021 Commonwealth Coastal Research Fellowship, VIMS
- 2020-2021 Dean's Fellowship, VIMS
- 2019-2020 MacWhorter Family Fellowship, VIMS
- July 2019 Tuition Scholarship, University of Washington, Friday Harbor Laboratories
- May 2019 Best Student Paper Award (Masters), VIMS
- Nov. 2018 International Student Opportunity Scholarship, William & Mary
- 2018-2019 Cothran-Stolberg Fellowship, VIMS
- 2018-2021 Mid-Atlantic Sea Grant / National Oceanic and Atmospheric Administration Ocean Acidification Program Graduate Research Fellowship (\$94,000)
- 2016-2017 H. Booker Andrews, Jr. Fellowship, VIMS

**(h) Community Outreach Experience:**

- Jan. 2023 **Invited speaker**, After Hours Lecture Series, VIMS  
Introduction to Chesapeake Bay water quality
- Feb. 2022 **Invited speaker**, Happy Hour Seminar Series, VIMS/Virginia Sea Grant  
Applications of 3-D water quality modeling tools in the Chesapeake Bay
- Mar. 2021 **Invited speaker**, Hooked on Ocean Acidification Series for Recreational Anglers, Mid-Atlantic Coastal Acidification Network
- 2020, 22 **Invited speaker**, Shellfish Aquaculture Industry Advisory Committee meetings  
Introduction to Chesapeake Bay water quality forecasting tools
- 2017, 19, 21 **Volunteer and invited speaker**, Marine Science Day, VIMS  
Introduction to ocean and coastal acidification and water quality forecasts
- 2017, 19, 21 **Volunteer** (*Room Runner and Time Keeper*), National Ocean Science Bowl High School Ocean Sciences Blue Crab Bowl, VIMS

**(i) Professional Service:**

*Service at Professional Organizations:*

- 2022 **Session Chair**, Chesapeake Community Research Symposium
- 2018-2021 **Member** of International Student Advisory Board, William & Mary
- 2018-2021 **Representative** of International Student Committee, VIMS

*Journal Article and Proposal Reviews:*

- Apr. 2023 Will serve as a panelist on the review panel for a NOAA proposal call
- 2023 Science of Total Environment (1) Limnology and Oceanography (1)
- 2022 Marine Pollution Bulletin (1) Estuarine, Coastal and Shelf Science (4)  
Marine Ecology Progress Series (2)
- 2021 Marine Pollution Bulletin (1) Journal of Geophysical Research: Oceans (2)
- 2020 Progress in Oceanography (1) Journal of Geophysical Research: Oceans (2)