

Fei Da
Curriculum Vitae

Postdoctoral Research Associate, Princeton University/NOAA Geophysical Fluid Dynamics Laboratory
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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*
- 2019.07-08 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 CO₂ 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 CO₂-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.

Fei Da
Curriculum Vitae

(g) Honors, Awards, and Grants:

Apr. 2022 2022 Editors' Citation for Excellence in Refereeing, Journal of Geophysical Research: Oceans, American Geophysical Union (AGU)
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, 2022 **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:

2023 Science of Total Environment (1 manuscript), Limnology and Oceanography (1 manuscript)
2022 Marine Pollution Bulletin (1 manuscript) Estuarine, Coastal and Shelf Science (4 manuscripts) Marine Ecology Progress Series (2 manuscripts)
2021 Marine Pollution Bulletin (1 manuscript) Journal of Geophysical Research: Oceans (2 manuscripts)
2020 Progress in Oceanography (1 manuscript) Journal of Geophysical Research: Oceans (2 manuscripts)