

Education and employment

- Oct. 2024- **Schmidt AI in Science Postdoctoral Fellow**
Scripps Institution of Oceanography, University of California San Diego
Advisor: Prof. Ian Eisenman
- 2018-2024 **PhD in Mathematics & Atmosphere-Ocean Science**
Courant Institute of Mathematical Sciences, New York University
Advisor: Prof. Laure Zanna
- 2014–2018 **Honours Bachelor of Integrated Science (Mathematics & Statistics Concentration)**
McMaster University
Summa Cum Laude. Undergraduate thesis advisor: Prof. Nicholas Kevlahan

Publications

- Basinski-Ferris, A., Zanna, L., and Eisenman, I. "Sources of uncertainty in the ocean response to idealized Antarctic meltwater input." (*in prep*).
- Falasca, F., Basinski-Ferris, A., Zanna, L., and Zhao, M. "Diagnosing the pattern effect in the atmosphere-ocean coupled system through linear response theory." (*submitted*). <https://arxiv.org/abs/2408.12585>.
- Basinski-Ferris, A., Zanna, L., and Eisenman, I. "An analytical theory for the sensitivity of regional sea level adjustment to the depth of Antarctic meltwater fluxes." (*submitted*).
<https://doi.org/10.22541/essoar.172407933.31488224/v1>
- Eisenman, I., Basinski-Ferris, A., Beer, E., and Zanna, L. "The Sensitivity of the Spatial Pattern of Sea Level Changes to the Depth of Antarctic Meltwater Fluxes." *Geophysical Research Letters*.
<https://doi.org/10.1029/2024GL110633>
- Basinski-Ferris, A. and Zanna, L. 2024. "Estimating freshwater flux amplification with ocean tracers via linear response theory." *Earth System Dynamics*. <https://doi.org/10.5194/esd-15-323-2024>.
- Davis, P.E.D. et al. 2023. "Suppressed basal melting in the eastern Thwaites Glacier grounding zone." *Nature*.
<https://doi.org/10.1038/s41586-022-05586-0>.
- Schmidt, B.E. et al. 2023. "Heterogeneous melting near the Thwaites Glacier grounding line." *Nature*.
<https://doi.org/10.1038/s41586-022-05691-0>.
- Holland, D.M., Nicholls, K.W., Basinski, A. 2020. "The Southern Ocean and its Interaction with the Antarctic Ice Sheet." *Science*. <https://doi.org/10.1126/science.aaz5491>.
- Basinski-Ferris, A. 2017. "Comparison of Mathematical Models of Opinion Dynamics." *The iScientist*.
<https://journals.mcmaster.ca/iScientist/article/view/1357>.

Awards & Distinctions

- 2024-2026 **Eric and Wendy Schmidt AI in Science Postdoctoral Fellowship**
Scripps Institution of Oceanography, University of California San Diego
- 2020 **Sandra Bleistein Prize**
Courant Institute of Mathematical Sciences, New York University
An award given annually for notable achievement in applied mathematics or computer science.
- 2018 **Henry M. MacCracken Graduate Fellowship**
New York University
- 2017 **NSERC Undergraduate Student Research Award ([NSERC USRA](#))**
Award held at McMaster University
Summer advisor: Prof. Walter Craig (Department of Mathematics & Statistics)
- 2014-2018 **Dean's Undergraduate Honour List**
McMaster University

Presentations

- May 2024 **NASA GISS Sea Level Seminar (invited)**
Talk: "Dependence of Regional Sea Level on the Depth of Meltwater Input"
- Feb 2024 **Ocean Sciences Meeting**
Talk: "Dependence of Regional Sea Level on the Depth of Meltwater Input"
- Dec 2023 **American Geophysical Union (AGU) fall meeting**
Talk: "Dependence of Regional Sea Level on the Depth of Meltwater Input"
- Spring 2023 **Community Earth System Model (CESM) working group meeting**
Talk: "Estimating freshwater flux amplification from ocean tracers via linear response theory"
- Dec 2022 **American Geophysical Union (AGU) fall meeting**
Talk: "Estimating freshwater flux amplification from ocean tracers via linear response theory"
- May 2022 **US CLIVAR Pattern Effect workshop**
Poster: "Examining processes setting the sea surface salinity pattern under anthropogenic forcing and relationships to sea surface temperature"
- Feb 2022 **Ocean Sciences Meeting**
Talk: "Examining the mechanisms behind changing salinity distributions and the impact of salinity storage on regional sea level"
- Dec 2016 **Poster at Canadian Mathematical Society (CMS) winter meeting**
Niagara Falls CMS Conference

Teaching

- 2023 **Curriculum development**
Climatematch Academy
Developed curriculum on ocean circulation for Climatematch Academy - a new online summer school that aims to make education about computational climate science accessible to a global population.
- 2022 **TA for Dynamics of the Earth's Atmosphere and Climate**
Courant Institute, New York University

- 2020–2021 **Grader for Graduate Ocean Dynamics and Graduate Linear Algebra I**
Courant Institute, New York University
- 2016–2018 **Tutor for undergraduate calculus, linear algebra, and differential equations**
McMaster University

Service

- 2022- **Peer reviewer for Geophysical Model Development, JGR: Oceans, and Earth's Future**
- 2023 **Committee on PhD student survey**
Courant Institute, New York University
- On a small committee of PhD students and faculty who analyzed survey results on departmental culture and presented key findings and action items.
- 2022-2024 **Discussion leader and participant in department DEI reading group**
Courant Institute, New York University
- Fall 2022 **Student co-host for visiting colloquium speaker**
Courant Institute, New York University
- Spring
2021 **Organizer for weekly Atmosphere Ocean Science Friday seminar**
Courant Institute, New York University
- 2020-2021 **Peer mentor for first year PhD student**
Courant Institute, New York University
- 2018-2019 **Co-organizer for weekly student lunch talks**
Courant Institute, New York University
- 2015-2016 **Peer reviewer for Undergraduate Research Journal - 'The iScientist'**
McMaster University

Additional Activities

- 2022 **NASA Summer School on Satellite Observations and Climate Models**
Jet Propulsion Laboratory Center for Climate Sciences and the Keck Institute for Space Studies
- Spring
2021 **Participant in Unlearning Racism in the Geosciences (URGE)**
Courant Institute, New York University

Technical skills

- Advanced Python (including numpy, matplotlib, xarray), MATLAB, LaTeX, git
Basic HTML, Javascript, bash