BIOGRAPHICAL SKETCH: ABIGAIL BODNER

EDUCATION

PhD Earth, Environmental and Planetary Sciences, Brown University *2021*

ScM Applied Mathematics, Brown University *2020*

MSc Atmospheric Sciences, Tel Aviv University *2019*

BSc Tel Aviv University, Double Major: Mathematics & Geophysics *2014*

APPOINTMENTS

Assistant Professor Earth, Atmospheric & Planetary Sciences, MIT *Janurary 2024-*

Visiting Scientist Earth, Atmospheric & Planetary Sciences, MIT *August-December 2023*

Postdoctoral Fellow Center for Atmosphere Ocean Science, Courant Institute, NYU *2021-Present*

HONORS AND EXPERIENCE

NASA Transform to Open Science Training Award, Co-Investigator *2023-2025*

Multiscale Machine Learning In Coupled Earth System Modeling, Affiliate *2022-Present*

Simons Society Junior Fellow Posdoctoral Award *AY 2021-2024*

Kavli Institute for Theoretical Physics University of California Santa Barbara
Graduate Fellow, Spring 2018 | Research Fellow, Fall 2021

Fundamental Aspects of Turbulent Flows in Climate Dynamics *Summer 2017*
Ecole de Physique des Houches, Les Houches, France.

Graduate awards
CESM Graduate Student Award 2022 | PODS XI 2021 | Presentation Award, AOFD 2019 | Sigma Xi 2019 | GoMRI Scholar 2018 | Brown Departmental Fellowship 2016 | TAU MSc Student Excellence Award 2015 |

SERVICE

Climatematch Academy Executive Director and Co-Founder *2021-Present*

Reviewer Journal of Physical Oceanography | Advances in Atmospheric Sciences | Geophysical Research Letters Journal of Turbulence | Journal of Advances in Modeling Earth System | Intergovernmental Panel on Climate Change, Sixth Assessment Report | Special Report on the Ocean and Cryosphere in a Changing Climate

Student Reviewer | **Session Convener** AGU 2022, 2023, OSM 2022, 2024

SELECTED PUBLICATIONS

Bodner, A.S, Balwada, D, & Zanna, L. **A Data-Driven Approach for Parameterizing Submesoscale Vertical Buoyancy Fluxes in the Ocean Mixed Layer**. *In preparation.*

Bodner, A.S., Fox-Kemper, B., Johnson, L., Van Roekel, L.P., McWilliams, J.C., Sullivan, P.P., Hall, P.S., & J.Dong (2022). **Modifying the Mixed Layer Eddy Parameterization to Include Frontogenesis Arrest by Boundary Layer Turbulence**. *Journal of Physical Oceanography.*

Bodner, A.S. & Fox-Kemper, B. (2020). **A Breakdown in Potential Vorticity Estimation Delineates the Submesoscale-to-Turbulence Boundary in Large Eddy Simulations**. *Journal of Advances in Modeling Earth Systems*, e2020MS002049.

Bodner, A.S., Fox-Kemper, B., Van Roekel, L.P., McWilliams, J.C. & Sullivan, P.P. (2019).
A Perturbation Approach to Understanding the Effects of Turbulence on Frontogenesis. *Journal of Fluid Mechanics*, 883.