

UCHIDA, Takaya

Office Address

Lamont-Doherty Earth Observatory
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Education

Doctor of Philosophy, Physical Oceanography
Columbia University in the City of New York, New York, NY
GPA 3.86
September 2019 (projected)

Bachelor of Engineering, Environmental Engineering
The University of Tokyo, Tokyo, Japan
GPA 3.71
March 2014

Publications in Preparation

- Uchida, T., D. Balwada, R. Abernathey, G. McKinley, S. Smith and M. Lévy. The impact of seasonality in eddy iron fluxes on primary production in the Southern Ocean. (*In Prep. for Nature Geosci.*).
- Uchida, T., D. Balwada, R. Abernathey, G. McKinley, S. Smith and M. Lévy. A mechanistic understanding of vertical eddy iron fluxes in the Southern Ocean: temporal and spatial scale decomposition. (*In Prep. for Journal of Adv. in Modeling Earth Sci.*).
- Uchida, T., D. Balwada and R. Abernathey. Characterizing the seasonality of phytoplankton biomass in the Southern Ocean observed by biogeochemical floats. (*In Prep. for Journal of Geophys. Res.: Oceans.*).
- Balwada, D., W. Chen, J. C. Ohlmann, T. Uchida and R. Abernathey. Velocity Structure Functions in California's Coastal Seas from Surface Drifters. (*In Preparation*)

Published Publications

- Uchida, T., R. Abernathey and S. Smith. Seasonality of eddy kinetic energy in an eddy permitting global climate model. *Ocean Modelling*, 2017. vol. 118, pp. 41-58.

Oral and Poster Presentations

- Uchida, T., D. Balwada, R. Abernathey, G. McKinley, S. Smith and M. Lévy. A mechanistic understanding on eddy iron transport in the Southern Ocean. *AMS 22nd Conference on Atmospheric and Oceanic Fluid Dynamics*, June 2019. Portland, USA.
- Uchida, T., D. Balwada and R. Abernathey. Revisiting the characterization of the seasonality in phytoplankton biomass in the Southern Ocean using bio-optical floats. *SOCOM Annual Meeting*, May 2019. Princeton, USA.
- Uchida, T., R. Abernathey, G. McKinley, S. Smith, D. Balwada and M. Lévy. Seasonality of (sub)mesoscale turbulence in the Southern Ocean and its impact on primary production. *AGU Fall Meeting*, December 2018. Washington D.C., USA.
- Uchida, T., R. Abernathey and S. Smith. Idealized study of seasonal dynamics in the Southern Ocean. *Gordon Research Conference*, June 2018. Andover, USA.
- Khatri, H., T. Uchida, and D. Balwada. Ocean surface spectral fluxes of kinetic energy, enstrophy and buoyancy variance from an earth system model. *Gordon Research Conference*, June 2018. Andover, USA.
- Uchida, T., R. Abernathey and S. Smith. Mixed-layer instability as a source of surface kinetic energy in the seasonal cycle in a global climate model. *AMS 21st Conference on Atmospheric and Oceanic Fluid Dynamics*, June 2017. Portland, USA
- Uchida, T. and R. Abernathey. Seasonality in ocean mesoscale turbulence in a high-resolution global climate model. *Ocean Sciences Meeting*, February 2016. New Orleans, USA.

Honors and Awards

- Scholarship from the Heiwa Nakajima Foundation, a private foundation in Japan, from September 2014 - August 2016.

Technical Skills

- Proficient in compiling and running numerical models in Fortran, with experience using the MITgcm.
- Proficient in big data analysis and has contributed to the development of Python open source packages such as `xrft`, `xomega` and `oceanmodes` all available on Github.

Service Activity

- Served as an elected representative of the Natural Sciences on the bargaining committee of the Graduate Workers of Columbia, United Auto Workers Local 2110, a labor union that

represents all graduate workers at Columbia University since March 2017. Lead our unit to gain union recognition from the Columbia administration in November 2018.