UCHIDA, Takaya

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Lamont-Doherty Earth Observatory
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Education

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

Master of Arts, Physical Oceanography — May 2016
Columbia University in the City of New York, New York, NY
GPA 3.96

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

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. *SOCCOM 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.