

# UCHIDA, Takaya

## Office Address

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<https://roxyboy.github.io>

## Education

Doctor of Philosophy, Physical Oceanography September 2019  
Columbia University in the City of New York, New York, USA  
GPA 3.86

Master of Arts, Physical Oceanography May 2016  
Columbia University in the City of New York, New York, USA  
GPA 3.89

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

## Publications in Preparation

- Balwada, D., W. Chen, J. C. Ohlmann, T. Uchida & R. Abernathey. Velocity Structure Functions in California's Coastal Seas from Surface Drifters. (*In Preparation*)

## Publications

- Uchida, T., D. Balwada, R. Abernathey, G. McKinley, S. Smith & M. Lévy. The impact of seasonality in eddy iron fluxes on primary production in the Southern Ocean. *Nature Comm.*, **11**, 1125. (2020).
- Uchida, T., D. Balwada, R. Abernathey, G. McKinley, S. Smith & M. Lévy. The contribution of submesoscale over mesoscale eddy iron transport in the open Southern Ocean. *J. Adv. Model. Earth Syst.*, **11**, 3934-3958. (2019).
- Uchida, T., D. Balwada, R. Abernathey, P. Channing, E. Boss & S. Gille. Southern Ocean Phytoplankton Blooms Observed by Biogeochemical Floats. *JGR: Oceans*, **124** (11), 7328-7343. (2019).
- Uchida, T., R. Abernathey & S. Smith. Seasonality of eddy kinetic energy in an eddy permitting global climate model. *Ocean Model.*, **118**, 41-58. (2017).

### **Oral and Poster Presentations**

- Jamet, Q., T. Uchida, & W. Dewar. Diagnosing eddy-to-small scale transfers in eNATL60. *DRAKKAR 2020 Annual Workshop*. February 2020. Grenoble, France.
- Uchida, T., D. Balwada, R. Abernathey, G. McKinley, S. Smith & M. Lévy. A Mechanistic Understanding on Eddy Iron Transport in the Southern Ocean. *AMS 22nd Conf. on Atmos. and Oceanic Fluid Dyn.* June 2019. Portland, Maine, USA.
- Uchida, T., R. Abernathey, G. McKinley, S. Smith, D. Balwada & 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 & S. Smith. Idealized study of seasonal dynamics in the Southern Ocean. *Gordon Research Conf.*, June 2018. Andover, Massachusetts, USA.
- Uchida, T., R. Abernathey & S. Smith. Mixed-layer instability as a source of surface kinetic energy in the seasonal cycle in a global climate model. *AMS 21st Conf. on Atmos. and Oceanic Fluid Dyn.* June 2017. Portland, Oregon, USA.
- Uchida, T. & R. Abernathey. Seasonality in ocean mesoscale turbulence in a high-resolution global climate model. *Ocean Sciences Meeting*. February 2016. New Orleans, Louisiana, USA.

### **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 `xgcm`, `xomega` and `oceanmodes` all available on Github.

### **Service Activity**

- Reviewer for the Journal of Oceanography and Limnology, Physical Oceanography, and Advances in Modeling Earth Systems.
- 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.