

# UCHIDA, Takaya

## Office Address

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## Education

Doctor of Philosophy, Physical Oceanography Columbia University in the City of New York, New York, USA	September 2019
Master of Arts, Physical Oceanography Columbia University in the City of New York, New York, USA	May 2016
Bachelor of Engineering, Environmental Engineering The University of Tokyo, Tokyo, Japan	March 2014

## Submitted

- Uchida T., Q. Jamet, W. Dewar, D. Balwada, J. Le Sommer & T. Penduff. Diagnosing the thickness-weighted averaged eddy-mean flow interaction in an eddying North Atlantic ensemble. *J. Adv. Model. Earth Syst.*
- Jamet, Q., B. Deremble, N. Wienders, T. Uchida & W. Dewar. On wind-driven energetics of subtropical gyres. *J. Adv. Model. Earth Syst.*

## Publications in Preparation

- Dewar, W., A. Poje, A. Adekunle, Q. Jamet & T. Uchida. A generalization of spectral analysis of eddy kinetic energy: the Empirical Orthogonal Function approach. *In prep.*
- Balwada, D., W. Chen, J. C. Ohlmann, T. Uchida & R. Abernathey. Velocity Structure Functions in California's Coastal Seas from Surface Drifters. *In prep.*

## 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.

### **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 Knut and Alice Wallenberg Foundation, *Journal of Physical Oceanography*, *Journal of Advances in Modeling Earth Systems*, *Journal of Oceanography and Limnology and Biogeosciences*.
- 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.