

# HENRI F. DRAKE

(+1) 415 244 8829 [◇ henrifdrake@gmail.com](mailto:henrifdrake@gmail.com)  
77 Massachusetts Ave, Cambridge, MA 02139  
Room 1615, Building 54

## EDUCATION

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**MIT/WHOI Joint Program in Oceanography** *2016 - Present*  
PhD Candidate in Physical Oceanography

**Haverford College** *2011 - 2015*  
B.S. in Mathematics, Magna Cum Laude

## EMPLOYMENT

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Graduate Research Assistant, MIT/WHOI Joint Program in Oceanography *2016 - Present*  
Research Specialist in Physical Oceanography, Princeton University *2015 - 2016*  
Summer Research Assistant in Topology, Haverford College *2014*  
Summer Research Assistant in Quantum Computing, University of Southern California *2013*  
Summer Research Assistant in Environmental Engineering, Clarkson University *2012*

## AWARDS

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National Science Foundation Graduate Research Fellowship *2017 - Present*  
MIT Rosenblith Presidential Fellowship *2016 - 2017*

## PUBLICATIONS

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### 2018

Drake, H. F., Morrison, A. K., Griffies, S. M., Sarmiento, J. L., Weijer, W., Gray, A. R. (2018). **Lagrangian timescales of Southern Ocean upwelling in a hierarchy of model resolutions.** *Geophysical Research Letters*, **45**. [\[doi\]](#) [\[Read online\]](#)

van Sebille, E., Griffies, S. M., Abernathey, R., Adams, T. P., Berloff, P., Biastoch, A., Blanke, B., Chassignet, E. P., Yu Cheng, Y., Cotter, C. J., Deleersnijder, E., Döös, K., Drake, H. F., Drijfhout, S., Gary, S. F., Heemink, A. W., Kjellsson, J., Koszalka, I. M., Lange, M., Lique, C., MacGilchrist, G. A., Marsh, R., Adame, C. G. M., McAdam, R., Nencioli, F., Paris, C. B., Piggott, M. D., Polton, J. A., Rühls, S., Shah, S. H. A. M., Thomas, M. D., Wang, J., Wolfram, P. J., Zanna, L., Zika, J. D. (2018). **Lagrangian ocean analysis: fundamentals and practices.** *Ocean Modelling*, **121**, 49-75. [\[doi\]](#) [\[Download PDF\]](#)

### 2017

Tamsitt, V., Drake, H. F., Morrison, A. K., Talley, L. D., Dufour, C. A., Gray, A. R., Griffies, S. M., Mazloff, M. R., Sarmiento, J. L., Wang, J., Weijer, W. (2017). **Spiraling up: pathways of global deep water to the surface of the Southern Ocean.** *Nature Communications*, **8**, 172. [\[doi\]](#) [\[Download PDF\]](#)

## SELECTED PRESENTATIONS

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Drake, H. F., Callies, J., Ferrari, R. (2018). **Impact of Mixing Layer Flows on the Abyssal Circulation and Stratification.** *Workshop on Bottom Boundary Layer Turbulence and the Ocean Overturning Circulation*, Massachusetts Institute of Technology, MA. [TALK]

Drake, H. F., Callies, J., Ferrari, R. (2018). **Boundary Mixing Forcing Abyssal Overturning.** *Gordon Research Conference on Ocean Mixing*, Hannover, NH. [POSTER]

Hausfather, Z., Drake, H. F., Abbott, T., Schmidt, G. (2018). **Assessing the Performance of Past Model Forecasts.** *American Geophysical Union Fall Meeting*, Washington, DC. [POSTER]

Drake, H. F., Callies, J., Ferrari, R. (2018). **Testing a New Paradigm for the Abyssal Ocean Circulation.** *Ocean Sciences Meeting*, Portland, OR. [TALK]

Drake, H. F., Callies, J., Ferrari, R. (2018). **Testing a New Paradigm for the Abyssal Ocean Circulation.** *Ocean Sciences Meeting*, Portland, OR. [TALK]

Drake, H. F., Tamsitt, V., Morrison, A. K., Sarmiento, J. L., Griffies, S. M., Weijer, W., Gray, A. R., Talley, L., Wang, J., Mazzlof, M., Dufour, C. (2017). **Spatial and Temporal Structure of Southern Ocean Upwelling.** *Graduate Climate Conference*, Woods Hole, MA. [POSTER]

Drake, H. F., Tamsitt, V., Morrison, A. K., Sarmiento, J. L., Griffies, S. M., Weijer, W., Gray, A. R., Talley, L., Wang, J., Mazzlof, M., Dufour, C. (2016). **Three-Dimensional Pathways of Deep Water Upwelling in the Southern Ocean.** *Southern Ocean Carbon and Climate Observations and Modelling (SOCCOM) Annual Meeting*, Scripps Institution of Oceanography, CA. [TALK]

Drake, H. F., Morrison, A. K., Sarmiento, J. L., Griffies, S. M., Weijer, W., Gray, A. R., Dufour, C. (2016). **Lagrangian Upwelling Pathways of Deep Waters in the Southern Ocean.** *Ocean Sciences Meeting*, New Orleans, LA. [POSTER]

## SERVICE

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Graduate Climate Conference, Planning Committee Co-Chair (2019) and Member (2017).

Society for Women in Marine Sciences, Symposium Planning Committee, 2018.

MIT Program for Atmospheres, Oceans, and Climate, Chair of Retreat Planning Committee, 2017.

Reviewer for *Nature* (1).

## OUTREACH

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Active Twitter for science communication (@henrifdrake), 1000+ followers.

Founder of **Climate Gamers**, a program that uses computer games to communicate climate science.

Active participant of Skype a Scientist program (15+ virtual classroom visits).

## FIELD WORK

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2018      MIT-WHOI Joint Program Orientation Cruise (10 days). Hydrography of the shelf break jet.