# Graduate Student, MIT / WHOI joint program in Physical Oceanography

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2016-present **Doctor of Philosophy**, MIT/ WHOI Joint Program in Oceanography.

Physical Oceanography

2014 **Study Abroad**, Lund University, Sweden.

Mathematics

2011–2015 Bachelor of Science, Haverford College, Magna Cum Laude.

Mathematics

#### Research

2016-present MIT / WHOI Joint Program in Oceanography.

Research Assistant (Physical Oceanography)

2015–2016 **Princeton University**.

Research Assistant (Physical Oceanography)

2014–2015 Haverford College.

Research Assistant (Knot Theory)

2013 University of Southern California.

Research Assistant (Quantum Computing)

2012 Clarkson University.

Research Assistant (Environmental Sensor Development)

#### Awards

2016-2017 **Presidential Fellowship Program**, Massachusetts Institute of Technology.

Graduate fellowship

2016 Graduate Research Fellowship Program, National Science Foundation.

Honorable mention

2015 Haverford College.

Honors thesis

2013 Howard Hughes Medical Institute.

Summer research fellowship

2012 Research Experience for Undergraduates (REU), National Science Foundation.

Summer fellowship

### Conference Presentations

2016 Southern Ocean Carbon and Climate Observations and Modeling (SOCCOM) Annual Meeting (Year 2), La Jolla, CA, Co-presented with Veronica Tamsitt, 05/10.

"3-D Pathways of Deep Water Upwelling"

Bldg 54-1620 (The Green Building)
Massachusetts Institute of Technology, Cambridge, MA 02139

② (415)244-8829 
■ Marake@mit.edu 
□ hdrake.github.io

2016 Ocean Sciences 2016: "Past, Present, Future Climate", New Orleans, LA, 02/22. "Lagrangian Upwelling Pathways of Deep Waters in the Southern Ocean"

### Seminar Presentations

- 2016 Princeton University Ocean Biogeochemistry spring seminar series, *Princeton*, *NJ*, 02/05.
  - "The Lagrangian Deep Water Upwelling Pathways in the Southern Ocean"
- 2016 Southern Ocean Carbon and Climate Observations and Modeling (SOCCOM) graduate student and post-doc webinar series, *Princeton, NJ*, 06/21.

  "3D Visualization and Animation in Python"
- 2016 Princeton University Atmospheric and Oceanic Sciences student and post-doc seminar series, *Princeton*, *NJ*, 06/27.
  - "Modelling Lagrangian upwelling pathways of deep waters in the Southern Ocean"

## Workshops

Workshop on the Future of Lagrangian Ocean Modelling, London, UK, 10/23-10/25.

## **Teaching**

- 2015 **Teaching assistant at Math Question Center**, Haverford College.
- 2012-2013 Peer Tutor in Mathematics and Physics, Haverford College.