

Stanford



Colette Kelly

Ph.D. Student in Earth System Science

 Curriculum Vitae available Online

Bio

HONORS AND AWARDS

- NSF Graduate Research Fellowship, National Science Foundation (2018)
- Enhancing Diversity in Graduate Education (EDGE) fellow, Stanford University (2017-present)
- Henry Sharp Prize for Outstanding Senior in Environmental Science, Barnard College of Columbia University (2017)
- Phi Beta Kappa, Barnard College of Columbia University (2016)

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Member, American Geophysical Union (2016 - present)

EDUCATION AND CERTIFICATIONS

- AB, Barnard College of Columbia University , Environmental Science (2017)
- AB, Barnard College of Columbia University , Dance (2017)

STANFORD ADVISORS

- Karen Casciotti, Doctoral (Program)

SERVICE, VOLUNTEER, AND COMMUNITY WORK

- Co-Chair, Stanford Earth Graduate Student Advisory Council
- Producer, The Ocean Trilogy Project and Stanford Art-SCI (10/1/2017)
- Teacher, Stanford GeoKids (2017)
- Teacher, Stanford Splash

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Humanity is performing a vast, global-scale experiment with the earth, with significant effects on the oceans. Biogeochemistry is a multifaceted tool kit to provide useful contributions to the collective understanding of these changes. As a PhD student in the Stanford Department of Earth System Science, I study biogeochemical nitrogen cycling, with a focus on nitrous oxide cycling in oxygen minimum zones. My research uses a combination of fieldwork, analytical techniques, and computational methods such as vertical modeling to delve into nitrous oxide cycling in places of disproportionally high production — notably, the oxygen minimum zone in the eastern tropical North Pacific Ocean (ETNP). As oxygen minimum zones expand, I will explore how these changes affect nitrogen cycling, and the production and fluxes of nitrous oxide.

Professional

WORK EXPERIENCE

- Graduate Research Assistant - Stanford University (June 2017 - present)
- Summer Student Fellow - Woods Hole Oceanographic Institution (June 2016 - August 2016)
- Undergraduate Research Fellow - Lamont-Doherty Earth Observatory (9/2014 - 5/2015)
- Teaching Assistant - Barnard College (1/2014 - 5/2017)

Publications

PUBLICATIONS

- **Quantitative drinking water arsenic concentrations in field environments using mobile phone photometry of field kits** *SCIENCE OF THE TOTAL ENVIRONMENT*
Haque, E., Mailloux, B. J., de Wolff, D., Gilioli, S., Kelly, C., Ahmed, E., Small, C., Ahmed, K., van Geen, A., Bostick, B. C.
2018; 618: 579–85
- **Dancing up the glass escalator: Institutional advantages for men in ballet choreography** *Columbia Undergraduate Research Journal*
Kelly, C. L.
2017; 1 (2)

PRESENTATIONS

- Quantifying Nitrous Oxide Cycling Regimes in the Eastern Tropical North Pacific Ocean with Isotopomer Analysis - Gordon Research Conference on Chemical Oceanography (7/14/2019 - 7/19/2019)
- Using Isotopomer Analysis to Determine Drivers of Nitrous Oxide Cycling in the Eastern Tropical North Pacific Ocean - Ocean Sciences Meeting, 2018 (February 14, 2018)
- Drivers of Seasonal and Interannual Variability in Waquoit Bay Carbonate Chemistry - ASLO Aquatic Sciences Meeting (2/1/2017)