

**Kyla Drushka**  
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## Research Interests

Observational oceanography, including: tropical air-sea interaction; submesoscale to basin-scale physics of the upper ocean; satellite oceanography; upper ocean salinity variations; rain impacts on the ocean.

## Education

2005 to 2011      Ph.D. in Physical Oceanography, Scripps Institution of Oceanography.  
2004                B.Sc. in Physics, McGill University.

## Professional Experience

July 2014 to present      Oceanographer at Applied Physics Laboratory and Affiliate Assistant Professor at the UW School of Oceanography (since 2015).  
October 2012 to June 2014      Postdoctoral researcher, Scripps Institution of Oceanography (SIO). With Sarah Gille and Janet Sprintall.  
2011 to 2012            Postdoctoral researcher, Laboratoire d'Océanographie – Expérimentation et Approches Numériques (LOCEAN). With Eric Guilyardi, Jérôme Vialard, and Matthieu Lengaigne.  
2005 to 2011            Graduate Research Assistant, Scripps Institution of Oceanography. Dissertation: *Ocean dynamics and thermodynamics in the tropical Indo-Pacific region*. Advisors: Janet Sprintall and Sarah Gille.  
2009 to 2010            Fulbright scholar in Oceanography, Australian Commonwealth Scientific and Research Organisation (CSIRO). With Susan Wijffels.  
2004                    Natural Sciences and Engineering Research Council of Canada Undergraduate Research Fellow: Ocean Dynamics Laboratory, University of British Columbia. With Rich Pawlowicz.  
2004                    Undergraduate Research: Department of Atmospheric and Oceanic Sciences, McGill University. With Nikolaj Nawri and Ronald Stewart.

## Honors and Awards

2013                    Editors' Citation for Excellence in Refereeing for *Geophysical Research Letters*.  
2013                    University National Oceanographic Laboratory System (UNOLS) Chief Scientist Early-Career Training Cruise, fellowship for a 7-day cruise and pre-cruise training.  
2008 to 2011            NASA Earth and Space Science Graduate Research Fellowship.  
2010                    AGU Outstanding Student Paper award, Fall meeting.  
2009 to 2010            Fulbright scholarship for graduate research at CSIRO in Hobart, Australia.  
2005 to 2006            Fulsom Fellowship for graduate study at SIO.  
2004                    Natural Sciences and Engineering Research Council of Canada: Undergraduate Student Research Award.

## Publications

- Bellenger, H, **K. Drushka**, W.E. Asher, G. Reverdin, M. Katsumata, and M. Watanabe (2017). Extension of the prognostic model of sea surface temperature to rain-induced cool and fresh lenses. *J. Geophys. Res.* 121. doi:10.1002/2016JC012429.
- Drushka, K.**, W. E. Asher, B. Ward, and K. Walesby (2016). Understanding the formation and evolution of rain-formed fresh lenses at the ocean surface. *J. Geophys. Res.* 121. doi:10.1002/2015JC011527.
- Kelly, K A., **K. Drushka**, L. Thompson, D. Le Bars, and E. L. McDonagh (2016). Impact of slowdown of Atlantic overturning circulation on heat and freshwater transports. *Geophys. Res. Lett.* 43(14) 7625–7631.
- Boutin, J., Y. Chao, W. E. Asher, T. Delcroix, R. Drucker, **K. Drushka**, N. Kolodziejczyk et al. (2015). Satellite and in situ salinity: Understanding near-surface stratification and sub-footprint variability. *Bull. Amer. Meteorol. Soc.*
- Drushka, K.**, H. Bellenger, E. Guilyardi, M. Lengaigne J. Vialard, and G. Madec (2015). Processes driving intraseasonal displacements of the eastern edge of the warm pool: the contribution of westerly wind events. *Clim. Dyn.* doi:10.1007/s00382-014-2297-z.
- Keerthi, M. G., M. Lengaigne, **K. Drushka**, J. Vialard, C. de Boyer Montegut, S. Pous, M. Levy, and P. M. Muraleedharan (2015). Intraseasonal variability of mixed layer depth in the tropical Indian Ocean. *Clim. Dyn.* 1-23, doi:10.1007/s00382-015-2721-z.
- Drushka, K.**, S. T. Gille, and J. Sprintall (2014). The diurnal salinity cycle in the tropics. *J. Geophys. Res.* 119(9), 5875–5890. doi:10.1002/2014JC009924.
- Drushka, K.**, J. Sprintall, and S. T. Gille (2014). Subseasonal variations in salinity and barrier-layer thickness in the eastern equatorial Indian Ocean. *J. Geophys. Res.* 119, 805–823, doi:10.1002/2013JC009422.
- Nieblas, A-E, **K. Drushka**, G. Reygondeau, V. Rossi, H. Demarcq, L. Dubroca, and S. Bonhommeau (2014). Defining Mediterranean and Black Sea biogeochemical subprovinces and synthetic ocean indicators using mesoscale oceanographic features. *PLoS ONE* 9(10): e111251. doi:10.1371/journal.pone.0111251.
- Ghani, M.H., L. R. Hole, I. Fer, V. H. Kourafalou, N. Wienders, H. Kang, **K. Drushka**, D. Peddie (2014). The SailBuoy remotely-controlled unmanned vessel: Measurements of near surface temperature, salinity and oxygen concentration in the Northern Gulf of Mexico. *Meth. in Oceanogr.* doi:10.1016/j.mio.2014.08.001.
- Nieblas, A.E., H. Demarcq, **K. Drushka**, B. Sloyan, and S. Bonhommeau (2013). Front variability and surface ocean features of the presumed southern bluefin tuna spawning grounds in the tropical southeast Indian Ocean. *Deep-Sea Res. II.* 107, 64–76, doi:10.1016/j.dsr2.2013.11.007.
- Vialard, J., **K. Drushka**, H. Bellenger, M. Lengaigne, S. Pous, and J.-P. Duvel (2013). Processes of Madden-Julian sea surface temperature signature in the North Western Australian Basin. *Clim. Dyn.* doi: 10.1007/s00382-012-1541-7.
- Drushka, K.**, S. Wijffels, J. Sprintall, and S. T. Gille (2012). In situ observations of Madden-Julian Oscillation mixed layer dynamics in the Indian and western Pacific Oceans. *J. Clim.* 25, 2306–2328.
- Drushka, K.**, J. Sprintall, S. T. Gille, and I. Brodjonegoro (2010). Vertical structure of Kelvin waves in the Indonesian Throughflow exit passages, *J. Phys. Oceanogr.*, 40(9), 1965–1987.
- Drushka, K.**, J. Sprintall, S. T. Gille, and W. S. Pranowo (2008). Observations of the 2004 and 2006 Indian Ocean tsunamis from a pressure gauge array in Indonesia, *J. Geophys. Res.*, 113, C07038.

## Research Cruises

- Aug-Sept 2016 SPURS-2: Tropical east Pacific, 42 Days (*R/V Revelle*). Chief Scientist: Andy Jessup, APL-UW.
- October 2013 UNOLS Chief Scientist Training Cruise: Mid-Atlantic Bight, 6 days (*R/V Endeavor*). Chief Scientist: Clare Reimers (Oregon State University).
- May 2013 Internal wave-breaking in the Luzon Strait: Luzon Strait, 10 days (*R/V Revelle*). Chief Scientist: Robert Pinkel (SIO).
- March 2008 PhilEx CTD and mooring recovery cruise: Philippines Straits, 23 days (*R/V Melville*). Chief Scientist: Arnold Gordon (LDEO, Columbia).
- March 2007 CLIVAR 19N repeat hydrography cruise: Eastern equatorial Indian Ocean, 42 days (*R/V Revelle*). Chief Scientist: Janet Sprintall (SIO).
- August 2004 Coupled biology and physics of the Strait of Georgia: Georgia Strait, BC, 1 day (*Canadian Coast Guard Hovercraft Siyay*). Chief Scientist: Randall Lee (University of British Columbia).

## Teaching, Mentoring, and Outreach

- August 2016 to present PhD supervisor to UW graduate student Suneil Iyer.
- March 2016 Community outreach through the "Meet a Scientist" program, Pacific Science Center.
- Autumn 2015 Communications Fellow, Pacific Science Center.
- Summer 2015 Mentor to a high school student in the Seattle Pacific Science Center internship program.
- 2013 to present Mentor to a student in the UCSD McNair Program for undergraduates considering research careers.
- 2014 Completed "The College Classroom" (UCSD), a course to prepare future faculty in using evidence-based teaching practices that support student learning.
- 2013 Course developer and instructor (SIO): "Matlab bootcamp", a week-long introductory class for incoming oceanography graduate students.
- 2009 Teaching assistant (SIO): "Satellite Remote Sensing". Professors: David Sandwell and Helen Fricker.

## Professional Activities

- Co-organizer of 2016 NASA Coupled Ocean Surface Variables workshop.
- Session chair for 2016 Ocean Sciences Meeting and 2016 AGU Fall Meeting.
- Member of US Climate Variability and Predictability (CLIVAR) Phenomena, Observations, and Synthesis panel (since 2015).
- Member of NASA's Physical Oceanography Distributed Active Archive Center (PO.DAAC) User Working Group (since 2015).
- Member of NASA's Ocean Salinity Science Team (since 2014) and Surface Water and Ocean Topography Science Team (since 2016).
- Reviewer for *Journal of Climate*, *Journal of Physical Oceanography*, *Journal of Geophysical Research*, *Geophysical Research Letters*, *Oceanography*, *Journal of Oceanography*, *Climate Dynamics*, *Remote Sensing of the Environment*, and *Dynamics of Atmospheres and Oceans*, as well as for NSF.

Panel reviewer for NASA.

Member of organizing committee for the International Meeting of Students in Physical Oceanography, 2008.

### Conference and Workshop Participation

2017 Surface Water and Ocean Topography (SWOT) Science Team Meeting. Toulouse, France. Oral/poster Presentation.

Global Ocean Salinity and the Water Cycle Workshop. Woods Hole, MA. May 2017. Oral presentation.

Frontiers in Ocean-Atmosphere Exchange: Air Sea Interface and Fluxes of Mass and Energy meeting. Cargèse, France. May 2017. Oral presentation (invited).

EGU General Assembly 2017. Vienna, Austria. Oral presentation.

Implementation of Multi-Disciplinary Sustained Ocean Observations workshop. Miami FL. Feb. 2017. (Invited).

2016 AGU Fall Meeting. San Francisco, CA. Poster Presentation.

2016 Surface Water and Ocean Topography (SWOT) Science Team Meeting. Pasadena, CA. Poster Presentation.

Liège Colloquium on Submesoscale Ocean Dynamics, Liège, Belgium, May 2016. Poster presentation.

2016 Ocean Sciences Meeting, New Orleans, LA. Oral presentation.

Salinity and Freshwater Changes in the Ocean conference. Hamburg, Germany. Oct., 2015. Oral presentation.

2014 Sea Surface Temperature Science Team Meeting. Annapolis, MD. Oral Presentation.

Aquarius/SAC-D Science Team Meeting 2014. Seattle, WA. Oral presentation.

Earth Observation for Ocean-Atmosphere Interactions Science 2014 meeting. Frascati, Italy. Oral presentation.

2014 Ocean Sciences Meeting. Honolulu, HI. Poster presentation.

Eastern Indian Ocean Upwelling Initiative workshop 2013. Yokohama, Japan.

EGU General Assembly 2012. Vienna, Austria. Oral presentation.

Workshop Ateliers de Modélisation de l'Atmosphère 2012. Toulouse, France. Oral presentation.

2011 World Climate Research Programme Open Science Conference. Denver, CO. Poster presentation.

2010 American Geophysical Union Fall Meeting. San Francisco, CA. Oral presentation.

International Meeting of Students in Physical Oceanography 2010. Seattle, WA. Oral presentation.

2010 Ocean Sciences Meeting. Portland, OR. Oral presentation.

2010 Australian Meteorological and Oceanographic Society Conference. Canberra, Australia. Oral presentation.

2009 Alpine Summer School on Monsoon Systems, Valsavarenche, Italy.

2008 American Geophysical Union Fall Meeting. San Francisco, CA. Poster presentation.

International Meeting of Students in Physical Oceanography 2008. La Jolla, CA. Oral presentation.

2008 Ocean Sciences Meeting. Orlando, FL. Oral presentation.