CV for Kate Adams, Ph.D.

Postdoctoral Scholar, Marine Physical Laboratory
Scripps Institution of Oceanography
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EDUCATION

2014 Ph.D. Oceanography, College of Earth, Ocean and Atmospheric Sciences, Oregon State University
Dissertation: *Influence of Upwelling-season Coastal Currents on Near-bottom Dissolved Oxygen Concentrations over a Submarine Bank*
Research advisor: Jack Barth

2009 M.S. Environmental Engineering, University of California

2005 B.S. Mechanical Engineering, Georgia Institute of Technology

PROFESSIONAL EXPERIENCE

Postdoctoral Scholar, Scripps Institution of Oceanography, University of California - San Diego
2017 - present

PI: Dr. Jen MacKinnon

- Investigating sub-mesoscale upper ocean processes in the Bay of Bengal.

Post-doctoral Research Fellow, Marine Physics, Plymouth University
2014 – 2017

PI: Dr. Phil Hosegood (Plymouth University), Co-PI: Dr. John Taylor (Cambridge University)

- Investigated submesoscale and mesoscale dynamics in the Scotia Sea for the Surface Mixed Layer Evolution at Submesoscales (SMILES) project.
- Managed an 8-hr watch during a 33-day research cruise in the Southern Ocean. *RRS James Clark Ross*. Led cruise dataset processing and submission to British Ocean Data Centre.
- Designed, deployed and recovered the first mooring in the British Indian Ocean Territory Marine Protected Area, Chagos Islands, Indian Ocean.

Graduate Research Assistant, Oregon State University, 2009-2014

PI: Dr. Jack Barth

Analyzed observations off the Oregon continental shelf to investigate the drivers of near-bottom oxygen dynamics at tidal to interannual time

scales as part of MI_LOCO: Microbial Initiative of Low-Oxygen areas off Concepción and Oregon.

Glider piloting & field operations, Oregon State University Glider Group, 2009-2012

- Remotely piloted Teledyne Webb Research Electric Slocum and University of Washington Seaglider autonomous underwater vehicles along the historic Newport-Hydrographic line.
- Deployed and recovered gliders from the *RV Elakha* and *RV Wecoma*, NE Pacific.
- Designed and conducted in-lab testing of chemical and optical oxygen sensors.

Mooring operations, OSU, 2010 – 2012

- Prepared and maintained a mid-shelf (70 m) mooring, April – October with two mid-season turnarounds.
- Chief scientist on recovery and deployment cruises. *RV Elakha*, Newport, Oregon.
- Conducted field and lab calibration tests for CTD, oxygen sensor, and acoustic Doppler current profiling instruments.

Project Engineer, Conversion Technology Inc., Atlanta, Georgia, USA
2007-2008

- Inspected and evaluated industrial sites for state and federal environmental, health and safety compliance.
- Provided consulting services on Environmental, Health and Safety projects including Stormwater Prevention Pollution Plans (SWP3), Spill Control and Countermeasures (SPCC) plans, Industrial Hygiene & Indoor Air Quality evaluations, EPA Tier2 reports, and Title V Air Quality Permit Applications.

TEACHING EXPERIENCE

Graduate Teaching Assistant, Oregon State University
2014 *Exploring the Deep*: Introductory undergraduate-level oceanography course. Instructor: Dr. Jack Barth
2012 *Fluid Earth*: Graduate-level introductory fluid dynamics of atmosphere and ocean. Instructor: Dr. Emily Shroyer
2010 *Math On the Beach*: Intensive two-week graduate-level mathematics course. Instructor: Dr. Bill Smyth

Graduate Student Instructor, UC Berkeley
2009 *Introduction to Fluid Dynamics*: Undergraduate-level lab course for 63 students. Instructor: Dr. Mark Stacey

Literacy Teacher Trainer & Primary School Teacher, Peace Corps Vanuatu
2005- Trained K-8 teachers in the *Leftemap* literacy program.
2007 Taught 5th grade English and Mathematics

Founder and Instructor, 'POP' Goes the Hood, Georgia Institute of Technology
2004 Awarded $1500 grant from Student Foundation to start an extracurricular class on preventative car maintenance and the basics of internal combustion and power transmission. Created the curriculum and teaching materials and delivered the 3-hour course for +100 students in one semester.

PUBLICATIONS

Adams, K. A., J. A. Barth, and F. Chan (2013) Temporal variability of near-bottom dissolved oxygen during upwelling off central Oregon, *J. Geophys. Res. Oceans*, 118, doi:10.1002/jgrc.20361.

Adams, K. A., J. A. Barth, and R. K. Shearman (2016) Intraseasonal Cross-Shelf Variability of Hypoxia along the Newport, Oregon, Hydrographic Line, *J. Phys. Oceanogr.,* 46, 2219–2238, doi: 10.1175/JPO-D-15-0119.1.

Adams, K.A., P. Hosegood, J.R. Taylor, J. Sallée, S. Bachman, R. Torres, and M. Stamper (2017) Frontal circulation and submesoscale variability during the formation of a Southern Ocean mesoscale eddy. *J. Phys. Oceanogr.*, 47,1737-1753, doi: 10.1175/JPO-D-16-0266.1.

Bachman, S., J.R. Taylor, K.A. Adams, and P. Hosegood (2017) Mesoscale and Submesoscale Effects on Mixed Layer Depth in the Southern Ocean, *J. Phys. Oceanogr.,***0**, doi: 10.1175/JPO-D-17-0034.1.

Adams, K. A., P. Hosegood, D. Munday, J. B. Sallée, J. R. Taylor (in prep), Mesoscale eddy crossing of the Scotia Ridge.

SELECTED PRESENTATIONS

2016 CASPO seminar series, Scripps Institution of Oceanography,
Liege Colloquium: Submesoscale dynamics
AGU Ocean Sciences, PO21A-01
2014 Invited Seminar. Plymouth Marine Laboratory
Eastern Pacific Ocean Conference (EPOC)
Invited Seminar. Hatfield Marine Science Center Seminar Series
2013 Invited Seminar. Physical Oceanography Seminar Series, University of Washington
Gordon Research Conference: Coastal Ocean Circulation. Poster presentation.

2012 Eastern Pacific Ocean Conference (EPOC)
AGU Ocean Sciences
2011 Eastern Pacific Ocean Conference (EPOC)
Invited Seminar. Universidad de Concepcion, Chile.
2010 Eastern Pacific Ocean Conference (EPOC)
AGU Ocean Sciences. Poster Presentation.

AWARDS & HONORS

2016 Visiting Scholar, Cambridge University, Department of Applied Mathematics and Theoretical Physics
2013 Editors' Citation for Excellence in Refereeing for *JGR- Oceans*
2011 Visiting Student Scholar, Universidad de Concepcion, Chile, 2011
2004 Georgia Tech IMPACT Scholar, 2004
2003 Georgia Tech Student Foundation Grant, $1500
2001-04 Boeing Scholar, $1500 per annum
2001-04 ChemCentral Employee Scholarship, $1500 per annum

SERVICE & MEMBERSHIP

Reviewer JGR-Oceans, GRL, JPO, 2013-current
Student Advisory Committee, CEOAS, 2011-2012
Promotion and Tenure Committee, CEOAS, Student Chair, 2011
AAAS, Member
American Geophysical Union, Member
American Meteorological Society, Member
Challenger Society, Member