
Joseph W. Long

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Professional Experience

June 2000 – July 2002	Hydraulic/Water/Wastewater Engineer, Stearns and Wheler, LLC, Cazenovia, NY
Sept. 2002 – June 2009	Graduate Research/Teaching Assistant, School of Civil and Construction Engineering, Oregon State University, Corvallis
July 2009 – Sept 2009	Post-doctoral Research Assistant, College of Oceanic & Atmospheric Sciences, Oregon State University, Corvallis
Oct 2010 – Sept 2012	Mendenhall Post-doctoral Fellow, U.S. Geological Survey St. Petersburg Coastal & Marine Science Center, St. Petersburg, FL
Oct 2012 – Present	Research Oceanographer, U.S. Geological Survey St. Petersburg Coastal & Marine Science Center, St. Petersburg, FL
Feb 2012 - Present	Adjunct Professor, Eckerd College, St. Petersburg, FL

Education

May 2000	B.S., Civil and Environmental Engineering, Clarkson University, Potsdam, NY
March 2005	M.Oc.Eng, School of Civil and Construction Engineering, Oregon State University, Corvallis, OR <i>Thesis Title: Offshore Controls on Nearshore Circulation</i>
May 2009	Ph.D., Civil Engineering, School of Civil and Construction Engineering, Oregon State University, Corvallis, OR <i>Dissertation Title: Modeling Shallow-Water Hydrodynamics: Rotations, Rips, and Rivers</i>

Awards & Professional Societies

- Invited and fully sponsored to attend/present at the *2011 Marine Geosciences Leadership Symposium* held by the Consortium for Ocean Leadership, Washington D.C (April 2011).
- American Geophysical Union Outstanding Student Paper Award, Fall Meeting 2004
- Invited and fully sponsored to attend/present at the *Oceans 2004 Conference*, Kobe, Japan. (Title: “Synthesizing Nearshore Circulation Results and Remote-Sensing Observations”)
- Supplemental Oregon Laurels Scholarship 2004-2005 (declined)
- American Geophysical Union Member (2002 – present)
- American Society of Civil Engineers (Assoc. Member) (2008 – present)
- Deans’ List (1996-2000)/Presidential Scholar (1998), Clarkson University

Teaching Experience & Training

- *Adjunct Professor:* Eckerd College, Natural Sciences, Introduction to the Oceans, Spring & Fall 2012
- *Teaching Assistant:* Oregon State University, Department of Civil, Construction, and Environmental Engineering, Fluid Mechanics, Fall 2004

- *Teaching Assistant:* Oregon State University, Department of Civil, Construction, and Environmental Engineering, Hydraulic Engineering, Winter 2005
- *Training Courses:* Success in the College Classroom (Winter 2008); Survival Skills for New Instructors (January 2008); Discovering your Teaching Philosophy (February 2008).
- *Outreach:* Developer/Instructor for the REU Introduction to Coastal Processes course (2004,2005), Instructor at the 2008 SMILE High School Tsunami Challenge; Instructor during the Great American Teach-In (November 2009), USGS Open House Instructor (2009, 2010).

Professional Service

- American Geophysical Union Fall Meeting 2010 Session Chair (Nearshore Processes)
- Journal reviewer: *Journal of Geophysical Research; Continental Shelf Research, Coastal Engineering, Environmental and Engineering Geoscience*
- USGS/USF Cooperative Assistantship Committee Member (Fall 2010)

Refereed Journal Publications

- Scott, C.P., D.T. Cox, T.B. Maddux, and **J.W. Long** (2005), Large-scale laboratory observations of turbulence of a fixed barred beach, *Meas. Sci. Technol.* 16, doi:10.1088/0957-0233/16/10/004
- **Long, J. W.**, and H. T. Özkan-Haller (2005), Offshore controls on nearshore rip currents, *J. Geophys. Res.*, 110, C12007, doi:10.1029/2005JC003018
- **Long, J. W.**, and H. T. Özkan-Haller (2009), Low-frequency characteristics of wave group-forced vortices, *J. Geophys. Res.*, 114, C08004, doi:10.1029/2008JC004894
- **Long, J. W.**, & Plant, N. G. (2012). Extended Kalman Filter framework for forecasting shoreline evolution. *Geophysical Research Letters*, 39(13).
- Nosal A.P., Cartamil D.C., **Long, J.W.**, Luhrmann M., Wegner N.C., Graham J.B. (2012), Demographic composition, movement patterns, and putative causes of leopard sharks (*Triakis semifasciata*) aggregating in a marine reserve along the open coast of southern California, USA, *Environmental Biology of Fishes*
- **Long, J. W.**, et al. (2011), Modeling alongshore flows over complex bathymetry during NCEX, *Coastal Engineering (in prep.)*

Published Conference Proceedings

- **Long, J.W.**, H.T. Özkan-Haller, and J.A. Shore (2004), Modeling of the Wave and Circulation Field at the Nearshore Canyon Experiment (NCEX), in *Proceedings of 29th International Conference on Coastal Engineering*, pp. Lisbon, Portugal.
- **Long, J.W.** and H.T. Özkan-Haller (2006), A New Look at Wave Group Induced Nearshore Circulation, in *Proceedings of 30th International Conference on Coastal Engineering*, pp. 1018-1027, San Diego, USA.
- **Long, J.W.** and H.T. Özkan-Haller (2008), Long-Term Predictions of Offshore Controlled Rip Currents, in *Proceedings of 31st International Conference on Coastal Engineering*, pp. 1018-1027, San Diego, USA.
- **Long, J.W.** and N.G. Plant (2010), Assimilating Models and Data to Enhance Predictions of Shoreline Evolution, in *Proceedings of 32nd International Conference on Coastal Engineering*, Shanghai, China.

Conference Presentations

- Özkan-Haller, H.T., and **J.W. Long** (2002), The determination of bottom friction using data assimilation methods (poster), *Eos Trans. AGU*, 83(47), Ocean Sci. Meet. Suppl., Abstract OS71A-0258
- **Long, J.W.**, Özkan-Haller, H.T., Lippman, T., Kaihatu, J.M., Welsh, D., and J.A. Shore (2003), On the Wave and Circulation Field at the Nearshore Canyon Experiment (NCEX), *AGU*, 84(46), Ocean Sci. Meet. Suppl., Abstract OS21I-04.
- Smith, G., D. Darnell, J. Magalen, **J. Long**, and T. Lippmann (2003), Shallow Water Bathymetry Measured During NCEX, *Eos Trans. AGU*, 84(46), Ocean Sci. Meet. Sup., Abstract OS32F-04.
- **Long, J.W.**, and H.T. Özkan-Haller (2004), Modeling and Understanding Rip Current Systems at NCEX, *Amer. Geophys. Union Fall Meeting*, San Francisco, CA.
- Fuji, E., Özkan-Haller, H.T., and J.W. Long (2004), Wave Transformation and Undertow Over a Barred Beach (poster), *Amer. Geophys. Union Fall Meeting*, San Francisco, CA.
- Long, J.W., H.T. Özkan-Haller, and R.A. Holman (2004), Synthesizing Nearshore Circulation Results and Remote-Sensing Observations (INVITED poster), *Oceans 04 Conference*, Kobe, Japan.
- Scott, C.P., D.T. Cox, T.B. Maddux, and J.W. Long (2004), Large-Scale Laboratory Observations of Turbulence of a Fixed Barred Beach (INVITED poster), *Oceans 04 Conference*, Kobe, Japan.
- Long, J.W., H.T. Özkan-Haller, and T. Lippmann (2006), Rip Current Life Spans: Growth, Persistence, and Decay (poster), *Eos Trans. AGU*, 87(36), Ocean Sci. Meet. Suppl., Abstract OS35D-09.
- Long, J.W. and H.T. Özkan-Haller (2009), Applying Nearshore Flow Models to Riverine Environments (poster), *Eos Trans. AGU*, Ocean Sci. Meet. Suppl.
- Long, J.W. and H.T. Özkan-Haller (2010), Forcing and Variability of Offshore Controlled Rip Currents, *1st International Rip Current Symposium*, Miami, FL.
- **Long, J.W.**, N.G. Plant, J.C. Warner, and J.H. List (2010), The role of 3D circulation in complex coastal environments (poster), *Eos Trans. AGU*, 91(26), Ocean Sci. Meet. Suppl., Abstract PO15E-11
- Oskamp, J.A., H.T. Özkan-Haller, **J.W. Long**, J.A. Barth, J.G. Brodersen, and A. Suanda (2010), Wave Predictions at the Site of a Wave Energy Conversion Array (poster), *Eos Trans. AGU*, 91(26), Ocean Sci. Meet. Suppl., Abstract MT45A-11
- **Long, J.W.**, N.G. Plant, and H. Stockdon (2010), Model-Data Fusion (and why our beaches depend on it), *3rd USGS Modeling Conference*, Denver, CO.
- **Long, J.W.**, N.G. Plant, and K. Sopkin (2010), Model Improvement by Assimilating Observations of Storm-Induced Coastal Change (poster), *Amer. Geophys. Union Fall Meeting*, San Francisco, CA.

Research Experience

- *Numerical Modeling*: Matlab, Fortran, REF/DIF1, SWAN, DELFT3D, STWAVE, OK-Model, ADCIRC, SBEACH, GENESIS, ROMS, XBEACH
- *Nearshore Canyon Experiment (NCEX)*: GPS Surveys, installing/operating remote observation systems
- *Laboratory experiment (undertow over a barred beach – 2D flume)*: Designing/constructing experimental setup, installing, collecting and analyzing *in-situ* velocity data.
- *Research Experience for Undergraduates (REU) Mentor*: Mentoring a visiting undergraduate researcher whose tasks included helping with the execution of a laboratory experiment,

compiling results into a scientific report, and preparation/delivery of a poster presentation at a national conference.