

Dr. Sutara (Ata) Suanda

CONTACT INFORMATION Scripps Institution of Oceanography 858-246-0885
La Jolla, CA 92093-0209 ssuanda@ucsd.edu

RESEARCH INTERESTS Coastal physical oceanography: I am interested in the processes that influence fluid properties in coastal, estuarine, and nearshore environments. Tides, internal waves, wind- and wave-driven flows.

EDUCATION **Oregon State University**, Corvallis, OR

Ph.D., Oceanography, Feb. 2014

- Thesis: *Tidal-band and high-frequency internal variability on the Central Oregon inner shelf*
- Advisor: Dr. John A. Barth

M.S., Oceanography, Dec. 2009

- Thesis: *Diurnal wind-driven processes on the northern Monterey Bay inner shelf*
- Advisor: Dr. John A. Barth

Wesleyan University, Middletown, CT

B.A., Physics, 2003

Additional Education

- University of Washington, Estuarine and Coastal Fluid dynamics course (2009)
- University of Utrecht, Summer School on Physics of the climate system (2008)
- Columbia University Lamont-Doherty Earth Observatory, National Science Foundation Research Experience for Undergraduates (2002)

RESEARCH EXPERIENCE **NSF Postdoctoral Fellow** October 2015 to present
Scripps Institution of Oceanography,
University of California, San Diego
Scientific Advisor: Falk Feddersen, Ph.D

Postdoctoral Scholar March 2014 to October 2015
Scripps Institution of Oceanography,
University of California, San Diego
Supervisor: Falk Feddersen, Ph.D

Research Assistant September 2007 to January 2014
College of Ocean and Atmospheric Sciences,
Oregon State University, Corvallis, OR

REFEREED JOURNAL PUBLICATIONS

1. **Suanda, S.H.**, Kumar, N., Feddersen, F. (2017) The effect of barotropic and baroclinic tides on coastal stratification and mixing. *Journal of Geophysical Research*, doi:10.1002/2017JC013379
2. Colosi, J., Kumar, N., **Suanda, S.H.**, Freismuth, T., MacMahan J. (2017) Statistics of Internal Tide Bores and Internal Solitary Waves Observed on the Inner Continental Shelf off Point Sal, CA *Journal of Physical Oceanography*, doi:10.1175/JPO-D-17-0045.1

3. **Suanda, S.H.**, Kumar, N., Miller, A.J., DiLorenzo, E., Haas, K., Cai, D., Edwards, C.A., Washburn, L., Fewings, M., Torres, R., Feddersen, F. (2016) Wind relaxation and a coastal buoyant plume north of Pt. Conception, CA: observations, simulations, and scalings. *Journal of Geophysical Research*, doi:10.1002/2016JC011919.
4. **Suanda, S.H.**, Perez, S., Feddersen, F. (2016) Evaluation of a source-function wavemaker for generating random directionally spread waves in the sea-swell band. *Coastal Engineering*, doi: 10.1016/j.coastaleng.2016.04.006.
5. Kumar, N., Feddersen, F., **Suanda, S.H.**, Uchiyama, Y., McWilliams, J., and O'Reilly, W. (2016) Mid- to inner-shelf coupled ROMS-SWAN model-data comparison of currents and temperature: Diurnal and semi-diurnal variability. *Journal of Physical Oceanography*, doi: 10.1175/JPO-D-15-0103.1
6. **Suanda, S.H.**, Barth, J.A. (2015) Semidiurnal baroclinic tides on the Central Oregon inner shelf. *Journal of Physical Oceanography*, doi: 10.1175/JPO-D-14-0198.1.
7. **Suanda, S.H.**, and Feddersen, F. (2015) A self-similar scaling for cross-shelf exchange driven by transient rip currents. *Geophysical Research Letters*, 42(13), doi: 10.1002/2015GL063944.
8. **Suanda, S.H.**, Barth, J.A., Holman, R.A. and Stanley, J. (2014) Shore-based video observations of nonlinear internal waves across the inner shelf, *Journal of Oceanic and Atmospheric Technology*, 31, 714-728.
9. **Suanda, S.H.**, Barth, J.A., and Woodson, C.B. (2011). Diurnal heat balance for the northern Monterey Bay inner shelf, *Journal of Geophysical Research*, 116(C9).
10. Thlusty, M.F., Metzler A., Huckabone S., **Suanda, S.H.**, and Guerrier, S. (2009) Morphological colour change in the American lobster (*Homarus americanus*) in response to background colour and UV light, *New Zealand Journal of Marine and Freshwater Research*, 43(1), 247-255.

SUBMITTED FOR
PUBLICATION

1. **Suanda, S.H.**, Feddersen, F., Spydell, M. S., Kumar, N., (2018) The effect of barotropic and baroclinic tides on coastal dispersion *Geophysical Research Letters*
2. Kumar, N., **Suanda, S.H.**, Colosi, J. A., Cai, D., Haas, K. A., Di Lorenzo, E., Miller, A. J., Edwards, C. A. (2017) Semidiurnal Internal Tide Generation and Propagation near Pt. Sal, CA: Observations and Model Simulations *Journal of Physical Oceanography*
3. Freismuth, T., Cai, D., MacMahan J., **Suanda, S.H.**, Colosi, J., Kumar, N., Miller, A.J., DiLorenzo, E., Haas, K., Edwards, C.A. (2017) Upwelling response to subtidal, alongshore inner shelf flow around a small-scale coastline promontory *Journal of Physical Oceanography*

INVITED
PRESENTATIONS

1. Nested modeling of the Coastal Ocean. *Workshop presenter* International Workshop on Oceanography of the Indonesian Seas. Mulawarman University, Indonesia. November, 2017.
2. Modeling high frequency processes on the inner shelf of a coastal upwelling system. University of California, Santa Cruz, U. S. A. March, 2017.
3. Multiple scales of physical processes in the coastal ocean: Examples from the North American West Coast. Nanyang Technological University, Singapore. November, 2016.

4. Special Course on Coastal Oceanography. Institut Teknologi Bandung, Indonesia. November, 2016.
5. Modeling multi-scale interactions on the inner shelf. Gordon Research Seminar on Coastal Ocean Modeling, U. S. A. June, 2015.
6. AWAC measurements of wind- and wave-driven flow on the inner shelf. NORTEK user symposium, U. S. A. May, 2010.

CONFERENCE
PRESENTATIONS

Oral Presentations

1. Suanda, S.H., Kumar, N, Spydell, M, Feddersen F. Barotropic and baroclinic tidal effects on coastal mixing and dispersion. Ocean Sciences, Portland, OR February, 2018
2. Suanda, S.H., Kumar, N, and others. Tidal effects in a realistic model of a thermally buoyant plume north of Pt. Conception. VIIIth International Symposium on Stratified Flows, San Diego, CA, August, 2016
3. Suanda, S.H., Kumar, N, and others. Modeling multi-scale interactions on the inner shelf. Ocean Sciences, New Orleans, LA, February, 2016
4. Suanda, S.H., Kumar, N, and others. Modeling multi-scale interactions on the inner shelf. Gordon Research Seminar on Coastal Ocean Modeling, 2015 (*invited*)
5. Suanda, S.H. Tidal-band and high-frequency internal waves on the Central Oregon inner shelf. Physical Oceanography Dissertation Symposium, Kauai, HI, October, 2014.
6. Suanda, S.H. and Barth, J.A. Understanding the timing and transports of high-frequency internal waves on the Oregon inner shelf. Ocean Sciences, Honolulu, HI, February, 2014.
7. Suanda, S.H. and Barth, J.A. Internal tides on the Oregon inner shelf. Eastern Pacific Oceans Conference, Stanford Sierra Camp, CA, September, 2013.
8. Suanda, S.H. and Barth, J.A. Contrasting regimes of internal wave activity on the Central Oregon inner shelf. Eastern Pacific Oceans Conference, Stanford Sierra Camp, CA, September, 2012.
9. Suanda, S.H. and Barth, J.A. Long-term observations of internal waves with shore-based video cameras. North Pacific Marine Science Organization (PICES), Hiroshima, Japan, October, 2012.
10. Suanda, S.H. and Barth, J.A. AWAC measurements of wind- and wave-driven flow on the inner shelf. NORTEK user symposium, Seattle, WA, May, 2010. (*invited*)

Poster Presentations

1. Suanda, S.H., Kumar, N, and Feddersen, F. Barotropic and baroclinic tidal effects on coastal stratification. Gordon Research Conference on Coastal Ocean Dynamics, 2017
2. Suanda, S.H. and Feddersen F. Vortex interactions between mean longshore currents and transient rip currents. AGU Fall Meeting, San Francisco, CA, December, 2016.
3. Suanda, S.H., Kumar, N, and others. Got Tides?: Tidal effects in a realistic coastal ocean model. Eastern Pacific Oceans Conference, Timberline, OR, September, 2016

4. Suanda, S.H., Kumar, N, and others. Modeling multi-scale interactions on the inner shelf. Gordon Research Conference on Coastal Ocean Modeling, 2015
5. Suanda, S.H. and Feddersen F. A self-similar scaling for transient rip currents. AGU Fall Meeting, San Francisco, CA, December, 2014.
6. Suanda, S.H. and Feddersen F. The role of transient rip currents in driving exchange between the surfzone and inner shelf. Eastern Pacific Oceans Conference, Timberline, OR, September, 2014.
7. Barth J.A., Suanda, S.H., Dudas, S.E., and Menge, B.A. Using inner-shelf internal wave indices to determine the recruitment of intertidal invertebrates. Ocean Sciences, Honolulu, HI, February, 2014.
8. Suanda, S.H. and Barth J.A. Internal tides on the Oregon inner shelf. Gordon Research Conference on Coastal Circulation, New London, NH, June, 2013.
9. Suanda, S.H. and Barth J.A. Streaks and Slicks: Observing the surface manifestation of internal processes in the coastal ocean. Heceta Head Coastal Conference, Florence , OR, October, 2012.

TEACHING EXPERIENCE	Workshop project leader	November 2017
	International Workshop on Oceanography of the Indonesian Seas. Mulawarman University, Indonesia	
	Undergraduate Research Advisor	Summer 2014, 2015, 2016
	Scripps Institution of Oceanography	
	Teaching Assistant	Summer 2013
	PICES summer course on Ocean Observing Newport, OR	
	Teaching Assistant	Spring 2010
	OC533 - Coastal and Estuarine Oceanography Oregon State University	
	Field Assistant	Fall 2008, 2009
	Math on the Beach Oregon State University	
OUTREACH EXPERIENCE	Scripps Community Outreach Program	Summer 2014 - present
	Pier tours	
	Frankfurt Book Fair Hands on science educator	Fall 2016
FIELD EXPERIENCE	<ul style="list-style-type: none"> • ONR inner-shelf pilot, RV <i>Oceanus</i>; Port Hueneme, CA. September 2015 Mooring and lander recovery, shipboard CTD measurements. • CSIDE, RV <i>Sally Ann</i>; Imperial Beach, CA. September 2015 Shipboard CTD and ADCP measurements. Shore-based deployments of surfzone measurements. • PICES summer course field program, RV <i>Elakha</i>; Newport, OR. Summer 2013 Shipboard CTD and water sampling and ADCP and moored temperature/conductivity measurements. (<i>Chief Scientist</i>) • Internal wave mooring deployment, RV <i>Elakha</i>; Newport, OR. Summer 2010, 2011 Shipboard CTD and mooring design, construction, deployment, recovery. (<i>Chief Scientist</i>) • Dye tracking experiment, RV <i>Wecoma</i>; Newport, OR. April 2009 Mini-bat and ARGOS drifters. • Wave energy baseline study, RV <i>Elakha</i>; Reedsport, OR. Fall 2009 	

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| PRIZES/HONORS | <ul style="list-style-type: none"> • National Science Foundation Postdoctoral Fellowship October 2015 • Heceta Head Coastal Conference Best Poster Award Fall 2012 • Burt Graduate Student Award for Physical Oceanography Fall 2009 • Matthews Memorial Fund Recipient Summer 2009 • Graduate Diversity Recruitment Bonus Fall 2007 |
| SERVICE | <ul style="list-style-type: none"> • Reviewer for <i>Continental Shelf Research</i>, <i>Journal of Physical Oceanography</i>, <i>Journal of Oceanography</i>, <i>Limnology and Oceanography</i>, <i>Ecology</i>, and <i>Journal of Geophysical Research Oceans</i> • Expert evaluator for PRESTIGE Marie Curie post-doctoral research fellowship, France • Proposal reviewer for National Science Foundation Physical Oceanography 2015 & 2017 • Session moderator, Nearshore Processes <i>AGU: Fall Meeting</i> December 2016 • Session moderator, Nearshore Processes <i>AGU: Ocean Sciences</i> February 2018 • Outstanding Student Presentation Judge <i>AGU: Ocean Sciences</i> February 2018 • Outstanding Student Presentation Judge <i>AGU: Fall Meeting</i> December 2016 • Session chair, <i>Eastern Pacific Oceans Conference</i> September 2016 • Meeting co-chair, <i>Eastern Pacific Oceans Conference</i> September 2014 • Meeting co-chair, <i>Gordon Research Seminar</i> June 2013 • Science judge, <i>National Ocean Science Bowl</i>, Oregon State University 2008 & 2010 |