

JEFF E. HANSEN

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EMPLOYMENT

2011 - Postdoctoral Scholar
Woods Hole Oceanographic Institution

EDUCATION

2007 - 2011 Ph.D., Earth and Planetary Sciences
University of California, Santa Cruz
Dissertation Title: Ebb-tidal Delta and Inlet Dynamics as a Control on Adjacent Beach Morphology

2005 - 2007 Master of Science, Applied Geosciences
San Francisco State University
Thesis Title: Quantifying Beach Response to Episodic Large Wave Events, Ocean Beach, San Francisco, CA

1998 - 2002 Bachelor of Science, Earth Sciences
University of California, Santa Cruz

PUBLICATIONS

- 2009 **Hansen, J.E.** and Barnard, P.L., The observed relationship between wave conditions and beach response, Ocean Beach, San Francisco, CA. *Journal of Coastal Research, Special Issue 56*, p. 1771-1775. (Available [here](#))
- 2009 Barnard, P.L., Erikson, L.H., and **Hansen, J.E.**, Monitoring and modeling shoreline response to shoreface nourishment on a high-energy coast. *Journal of Coastal Research, Special Issue 56*, p. 29-33. (Available [here](#))
- 2009 Barnard, P. L., Erikson, L.H., **Hansen, J.E.**, and Elias, E., The performance of nearshore dredge disposal at Ocean Beach, San Francisco, California: 2005-2007, U.S. Geological Survey Open-File Report 2008-1347, 112 pp. (Available [here](#))
- 2010 **Hansen, J.E.** and Barnard, P.L., Sub-weekly to interannual variability of a high-energy shoreline. *Coastal Engineering*, 57(11-12): 959-972, doi:10.1016/j.coastaleng.2010.05.11. (Available [here](#))
- 2011 Yates, M.L., Guza, R.T., O'Reilly, W.C., **Hansen, J.E.**, and Barnard, P.L., Equilibrium shoreline response of a high-energy beach. *Journal of Geophysical Research*, 116(C04014), doi:10.1029/2010JC006681.
- 2011 **Hansen, J.E.**, Elias, E., List, J.H., and Barnard, P.L., (2011), A numerical model investigation of the formation and persistence of an erosion hotspot, *Proceedings of Coastal Sediments 2011*, World Scientific, Miami, FL. (Available [here](#))
- 2011 Barnard, P.L., Allan, J., **Hansen, J.E.**, Kaminsky, G.M., and Ruggiero, P., The impact of the 2009-10 El Niño Modoki on U.S. West Coast beaches. *Geophysical Research Letters*. 38, L13604, doi:10.1029/2011GL047707.
- 2011 Elias, E. and **Hansen, J.E.**, Sediment transport patterns in the San Francisco Bight. *Marine Geology* (In review)
- 2011 **Hansen, J.E.**, Elias, E., List, J.H., Erikson, L.H., and Barnard, P.L., Alongshore circulation driven by waves and tides at an inlet adjacent energetic shoreline. Submitted to *Journal of Geophysical Research* (In review)
- 2011 **Hansen, J.E.**, Janssen, T.T., Jones, I., and Barnard, P.L., Observations of pressure-gradient dominated alongshore circulation at an exposed ocean beach. *Geophysical Research Letters* (In review)

PRESENTED ABSTRACTS (only as first author shown)

- 2006 Hansen, J.E., Barnard, P.L., and Eshleman, J.E., Quantifying beach response to episodic large wave events, a predictive empirical model, Ocean Beach, San Francisco, California. *Eos Trans. AGU, Fall Meet. Suppl.* (Poster)
- 2006 Hansen, J.E., Ho, T., Li, A., Perez, A., Wong, Y., and Bissell, M., Variation of the beach profile, Ocean Beach, San Francisco. *Eos Trans. AGU, Fall Meet. Suppl.* (Poster)
- 2007 Hansen, J.E., Erikson, L.H., Barnard, P.L., and Eshleman, J.L., Correlation of sub-aerial beach change with numerical model derived nearshore wave conditions. *Eos Trans. AGU, Fall Meet. Suppl.* (Poster)
- 2008 Hansen, J.E. and Barnard, P.L., The spatial and temporal variability of a high energy beach: Insight gained from over 50 high-resolution sub-aerial surveys. *Eos Trans. AGU, Fall Meet. Suppl.* (Oral)
- 2009 Hansen, J.E. and Barnard, P.L., A simple model for predicting shoreline position at monthly to multi-year timescales. *Eos Trans. AGU, Fall Meet. Suppl.* (Oral)
- 2010 Hansen, J.E., Elias, E., List, J.H., Erikson, L.H. and Barnard, P.L., Sediment transport processes at Ocean Beach, San Francisco, CA. *Ocean Sciences Meeting.* (Oral)
- 2010 Hansen, J.E. and Barnard, P.L., Sub-weekly to interannual variability of a high-energy shoreline. *Eos Trans. AGU, Fall Meet. Suppl.* (Oral, Invited)

SEMINARS

- 2010 High-resolution modeling at Ocean Beach, San Francisco, CA: Implications for regional sediment management. *US Army Corps of Engineers Coastal Hydraulics Laboratory, Vicksburg, MS* (Invited).

TEACHING EXPERIENCE

- 2005 Teaching Assistant, Introductory Oceanography, San Francisco State University
- 2008 Teaching Assistant, Coastal Geology, University of California, Santa Cruz
- 2009 Teaching Assistant, Coastal Geology, University of California, Santa Cruz

SCHOLARSHIPS AND FELLOWSHIPS

- 2006 Robert W. Maxwell Scholarship, San Francisco State University College of Science and Engineering
- 2007 University of California Regents Fellowship

GRANTS AWARDED

- 2008 California Department of Boating and Waterways (\$40,000), for purchase of GPS equipment used for high-resolution shoreline mapping.

FIELD, INSTRUMENT AND SOFTWARE EXPERIENCE

- Proficient in collection and processing of real-time kinematic and differential position data using Trimble and Ashtech dual-channel GPS receivers.
- Extensive experience on various topographic and bathymetric survey platforms including all-terrain vehicles and personal water craft.
- Experience with programming, deployment and data processing of acoustic current and wave instruments including Nortek Vectors, Aquadopps, and AWACs and Paros Scientific pressure sensors.
- Project management experience leading a large field experiment (~20 instruments) and survey activities at Ocean Beach, CA.
- Extensive knowledge of Delft3D and SWAN numerical modeling suite.
- Proficient in MATLAB, ArcGIS and GrafNav software packages.

STUDENT MENTORSHIP

- 2011 Isaac S. Jones, MSc committee member, San Francisco State University