

## Daniel T. Cox

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### **1. Professional Preparation**

University of Delaware	Civil Engineering	B.S.	1987
University of Delaware	Civil Engineering	M.S.	1989
University of Delaware	Civil Engineering	Ph.D.	1995

### **2. Appointments**

Assoc. Director	NIST Community Resilience Center of Excellence	2014 – now
Professor	Civil and Constr. Engineering, Oregon State University	2009 – now
Adjunct Prof.	College of Earth, Ocean and Atmospheric Science	2007 – now
Visiting Scholar	Disaster Prevention Research Inst., Kyoto Univ., Japan	2010 – 2011
Director	Hinsdale Wave Res. Laboratory, Oregon State University	2002 – 2010
Assoc. Prof.	Civil Engineering, Oregon State University	2002 – 2009
Assoc. Prof.	Civil Engineering, Texas A&M University	2001 – 2002
Assistant Prof.	Civil Engineering, Texas A&M University	1995 – 2001
Res. Assistant	Center for Applied Coastal Research, Univ. of Delaware	1991 – 1995
Visiting Scholar	Coastal Engineering Laboratory, Kyoto University, Japan	1989 – 1991
Res. Assistant	Center for Applied Coastal Research, Univ. of Delaware	1987 – 1989

### **3. Professional Awards and Recognition**

Co-author of paper awarded ASCE/SEI Raymond C. Reese Research Prize, 2015.  
Co-author of outstanding paper, *Journal of Performance of Constructed Facilities*, 2013.  
Outstanding Research Leadership Award, Oregon State University College of Engineering, 2013.  
Japan Society for the Promotion of Science, Long-Term Invitation Fellow, 2010-2011.  
Research Collaboration Award, Oregon State University College of Engineering, 2006.  
United States Senate Testimony, Subcommittee on Tsunami Preparedness, 2005.  
Japan Society for the Promotion of Science, Short-Term Invitation Fellow, 1999.  
NSF Faculty Early Career Development (CAREER) Award, 1998.

### **4. Professional Activities**

Journal Editor:

Associate Editor, *Journal of Waterway, Port, Coastal and Oc. Engrg.*, 2012 – now.  
Associate Editor, *Sustainable and Resilient Infrastructure*, 2015 – now.  
Associate Editor, *Coastal Engineering Journal*, 2001 – 2003, 2011 – 2013.  
Editorial Board, *KSCE Journal of Civil Engineering*, 2011 – 2013.

Journal Reviewer:

<i>Applied Geography</i>	<i>Journal of Coastal Research</i>
<i>Applied Ocean Research</i>	<i>Journal of Engineering Mechanics</i>
<i>Climate Change</i>	<i>Journal of Geophysical Res. – Ocean</i>
<i>Coastal Engineering</i>	<i>Journal of Geophysical Res. – Earth Surface</i>
<i>Coastal Engineering Journal</i>	<i>Journal of Hydraulic Engineering</i>

<i>Continental Shelf Research</i>	<i>Journal of Hydraulic Research</i>
<i>Earthquake Spectra</i>	<i>Journal of Oc. Engrg. and Marine Energy</i>
<i>Engineering Mechanics</i>	<i>Journal of Performance of Constr. Facilities</i>
<i>Estuarine, Coastal and Shelf Science</i>	<i>Journal of Wtwy, Port, Coast. and Oc. Engrg</i>
<i>European Journal of Mechanics - Fluids</i>	<i>Marine Geology</i>
<i>Experiments in Fluids</i>	<i>Natural Hazards</i>
<i>Intern. Society of Offshore and Polar Engrs.</i>	<i>Ocean Engineering</i>
<i>Geomorphology</i>	<i>Structures</i>

Proposal Reviewer:

National Science Foundation  
 NOAA Sea Grant (Alabama, Alaska, California, Delaware, Florida, Texas)  
 Netherlands Organization for Scientific Research  
 Technology Foundation STW (The Netherlands)  
 Qatar National Research Foundation

Committees and Service:

Coastal Engineering Research Council, 2015 – now  
 NRC Committee on USACE Coastal Risk Reduction, 2013 – 2014  
 ASCE Standards, Tsunami Loads and Effects Subcommittee, 2011 – 2015.  
 ASCE Standards, Flood Load committee, 2013 – now.  
 ASCE Coasts, Oc., Ports, and Rivers Inst. (COPRI) Coastal Structures (Chair), 2013 – 2015.  
 ASCE Coasts, Oc., Ports, and Rivers Institute (COPRI) Board of Governors, 2004.  
 ASCE Coasts, Oc., Ports, and Rivers Institute (COPRI) Communications, 1997 – 2002.  
 Network for Earthquake Engineering. Simulation, Education and Outreach, 2010 – 2014

Conferences/Workshops

NSF NHERI Workshop, Corvallis OR, 2015.  
 Organizer: *ASCE/COPRI Coastal Structures 2015*  
 Session chairs: *Waves 2001, ICCE 2002, CStr 2007, NEES 2008, CStr 2011, ICCE 2014,*

**5. Courses Taught (since 09/2002)**

1. CE 311 Fluid Mechanics
2. CE 313 Fluid Hydraulics
3. CE 4/511 Introduction to Ocean Engineering
4. CE 4/515 Coastal Infrastructure
5. CE 631 Linear Wave Theory II
6. CE 642 Random Waves
7. CE 645 Wave Forces
8. CE 647 Ocean and Coastal Measurements

**6. Publications**

**6.1 Refereed Papers**

1. Do, Trung, van de Lindt, J., Cox, D. “Performance-Based Design Methodology for Inundated Elevated Coastal Structures Subjected to Wave Load Engineering Structures,” *Engineering Structures*, (accepted 02/2016).
2. Chen, X., Zhan, J., Chen, Q., Cox, D., “Numerical Modeling of Hurricane-Induced Wave Forces on Movable Bridge Decks”, *Bridge Engineering* (accepted 2/2016).
3. Wu, W.-C., Ma, G., Cox, D.T., “Modeling wave attenuation induced by the vertical density variations of vegetation,” *Coastal Engineering* (accepted 02/2016).

4. Park, H., Cox, D. "Empirical wave run-up formula for wave, storm surge and berm width," *Coastal Engineering*, (In press)
5. Wu, W.-C., Cox, D.T., "Effects of vertical variation in vegetation density on wave attenuation," *Journal of Waterway, Port, Coastal and Ocean Engineering* , 142, 2.
6. Yoon, H.D., Cox, D.T., and Mori, N. "Parameterization of time-averaged suspending sediment concentration in the nearshore," *Water*, 7(11), 6228-6243.
7. Wang, H., Mostafizi, A., Cramer, L., Cox, and Park, H., (2015) "Agent-based modeling of multimodal nearfield tsunami evacuation: Decision making and life safety," *Transportation Research Part C: Emerging Technologies*.
8. Wu, W.-C., Cox, D.T., (2015) "Effects of wave nonlinearity on wave attenuation by vegetation," *Estuarine, Coastal and Shelf Science*, 164, 443 – 450.
9. Lemein, T., Cox, D.T., Albert, D., Mori, N. (2015) "Accuracy of Optical Image Analysis Compared to Conventional Vegetation Measurements for Estimating Morphological Features of Emergent Vegetation," *Estuarine, Coastal and Shelf Science*. 115, 66 – 74.
10. Feagin, R.A., Figlus, J., Zinnert, J.C., Sigren, J., Martínez, M.L., Silva, R., Smith, W.K., Cox, D., Young, D.R., Carter, G. (2015) "Going with the flow or against the grain? The promise of vegetation for protecting beaches, dunes, and barrier islands from erosion," *Frontiers in Ecology and the Environment*, 13, 203–210.
11. Park, H., Cox, D.T., and Petrof, C. (2014) "An empirical solution for tsunami runup on compound slopes," *Natural Hazards*, 76, 1727–1743.
12. Ko, H., Cox, D.T., Riggs, R., Naito, C. (2014) "Hydraulic Experiments on Impact Forces from Tsunami-Driven Debris," *Journal of Waterway, Port, Coastal and Ocean Engineering*, 10.1061/(ASCE)WW.1943-5460.0000286.
13. Shin, S., Yoon, H.-D., Cox, D. (2014) "Numerical Modeling of Surf Zone Hydrodynamics over a Moveable Bed," In: Stephen, P.L. and Lee, J.L. (eds.), *Journal of Coastal Research*, Special Issue No. 72, 139 – 174.
14. Riggs, H. R., Cox, D. T., Naito, C. J., Kobayashi, M. H., Piran A., P., Ko, H. T.-S. and Khowitar, E. (2014) "Water-driven debris impact forces on structures: experimental and theoretical program" *J. Offshore Mechanics and Arctic Engineering*, 136, doi:10.1115/1.4028338.
15. Wiebe, D., Park, H., Cox, D.T. (2014) "Application of the Goda Pressure Formula to Horizontal Wave Loads on Elevated Structures," *KSCE Journal of Civil Engineering* DOI 10.1007/s12205-014-0175-1.
16. Rueben, M., Cox, D.T., Holman, R., Shin, S., and Stanley, J. (2014) "Optical Measurements of Tsunami Inundation and Debris Movement in a Large-Scale Wave Basin," *Journal of Waterway, Port, Coastal and Ocean Engineering*, 10.1061/(ASCE)WW.1943-5460.0000267
17. Wiebe, D.M., and Cox, D.T. (2014) "Application of Fragility Curves to Estimate Damage and Economic Loss at a Community Scale: A Case Study of Seaside, Oregon," *Natural Hazards*, 71, 2043 – 2061.
18. Linton, D.L., Gupta, R., Cox, D., van de Lindt, J. (2014) "Load Distribution in Light-Frame Wood Buildings under Experimentally Simulated Tsunami Loads," *Journal of Performance of Constructed Facilities*. 10.1061/(ASCE)CF.1943-5509.0000487.

19. Blackmar, P.J., Cox, D.T., Wu, W.-C. (2014) "Laboratory Observations and Numerical Simulations of Wave Height Attenuation in Heterogeneous Vegetation," *Journal of Waterway, Port, Coastal and Ocean Engineering*, 140(1), 56–65.
20. Naito, C., Cercone, C., Riggs, R., and Cox, D. (2013) "A Procedure for Site Assessment of the Potential for Tsunami Debris Impact," *Journal of Waterway, Port, Coastal and Ocean Engineering*. 10.1061/(ASCE)WW.1943-5460.0000222.
21. Rhinefrank, K., Schacher, A., Prudell, J., Cruz, J., Jorge, N., Stillinger, C., Naviaux, D., Brekken, T., von Jouanne, A., Newborn, D., Yim, S., Cox, D. (2013) "Numerical Analysis and Scaled High Resolution Tank Testing of a Novel Wave Energy Converter," *Journal of Offshore Mechanics and Arctic Engineering*, 135, 4, DOI: 10.1115/1.4024886.
22. Park, H., Cox, D., Lynett, P., Wiebe, D., Shin, S. (2013) "Tsunami Inundation Modeling in Constructed Environments: A Physical and Numerical Comparison of Free-Surface Elevation, Velocity, and Momentum Flux," *Coastal Engineering*, 79, 9-21.
23. Mori, N., Cox, D.T., Yasuda, T., Mase, H. (2013) "Overview of the 2011 Tohoku Earthquake Tsunami Damage and relation with Coastal Protection along the Sanriku Coast," *Earthquake Spectra*, 29, S1, 127-143.
24. Mase, H., Kimura, Y., Yamakawa, Y., Yasuda, T., Mori, N., Cox, D.T. (2013) "Were Coastal Defense Structures Broken Completely by Unexpectedly Huge Tsunami - Field Survey" *Earthquake Spectra*, 29, S1, 145-160.
25. Albert, D., Cox, D.T., Lemein, T., and Yoon, H.D (2013) "Characterization of *Schoenoplectus pungens* in a Great Lakes Coastal Wetland and a Pacific Northwest Estuary", *Wetlands*, 33, 3, 445-458.
26. Yoon, H.-D., D. T. Cox, and M. Kim, (2013) "Prediction model for sediment suspension using artificial neural network", *Coastal Engineering*, 71, 78 - 86.
27. Naito, C., Cox, D., Yu, K., Brooker, H. (2013) "Fuel Storage Container Performance During the 2011 Tohoku Japan Tsunami," *Journal of Performance of Constructed Facilities*, July/August, DOI: 10.1061/(ASCE)CF.1943-5509.0000339. (Outstanding paper, 2013)
28. Linton, D., Gupta, R., Cox, D., van de Lindt, J., Oshnack, M.E., Clauson, M., (2013) "Evaluation of tsunami loads on wood frame walls at full scale," *Journal of Structural Engineering*, 139, Special Issue: NEES2: Advances in Earthquake Engineering, 1318 – 1325. (ASCE/SEI Raymond C. Reese Research Prize, 2015)
29. Kim, K., Park, H., Shin, S., Cox, D. (2012) "Three-Dimensional Laboratory Experiments for Tsunami Inundation in a Coastal City", *Journal of Korean Society of Coastal and Ocean Engineers*, 24(6), 400-403 (in Korean)
30. Park S., J.W. van de Lindt, D. Cox, R. Gupta, (2012) "Concept of Community Fragilities for Tsunami Coastal Inundation Studies," *ASCE Natural Hazards Review* 10.1061/(ASCE)NH.1527-6996.0000092.
31. Yoon, H.-D., and D. T. Cox, (2012) "Cross-shore variation of intermittent sediment suspension and turbulence induced by depth-limited wave breaking", *Continental Shelf Research*, 47, 15, 93-106.
32. Park S., J.W. van de Lindt, R. Gupta, and D. Cox. (2012) "Method to Determine Locations of Tsunami Vertical Evacuation Shelters," *Natural Hazards*, 63, 2, 891 - 908.

33. Park, S., J.W. van de Lindt, D. Cox, R. Gupta, and F. Aguiniga, (2012) "Successive earthquake-tsunami analysis to develop collapse fragilities," *Journal of Earthquake Engineering*, 16, 6, 851 – 863.
34. Zarnetske, P.L, Hacker, S.D., Seabloom, S.W., Ruggiero, P., Killian, J.R., Maddux, T.B., Cox, D.T. (2012) "Biophysical feedback mediates effects of invasive grasses on coastal dune shape," *Ecology*, 93, 1439–1450.
35. Lehrman, J.B., Higgins, C., Cox, D. (2012) "Performance of Highway Bridge Girder Anchorages under Simulated Hurricane Wave Induced Loads," *Journal of Bridge Engineering*, 17, 2, 259 – 271.
36. Thomas, S. and Cox, D.T. (2011) "Influence of Finite Width Seawalls for Tsunami Loading on Coastal Structures," *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 138, 3, 203 – 214.
37. Bradner, C., Schumacher, T., Cox, D., Higgins, C. (2011) "Large-scale physical modeling of wave forces on bridge superstructures," *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 137, 3 – 11.
38. Reuben, M., Holman, R., Cox, D., Killian, J., Stanley, J. (2010) "Optical measurements of tsunami inundation through an urban waterfront modeled in a large-scale laboratory basin" *Coastal Engineering*, 58(3): 229-238.
39. Yoon, Y.D., Cox, D. (2010) "Large-scale laboratory observations of wave breaking turbulence on a moveable bed with vertically employed acoustic-Doppler velocimeters," *J Geophysical Research*, doi: 10.1029/2009jc005748.
40. Suzuki, T., Sungwon, S., Cox, D.T. and Mori, N. (2009). Temporal-spatial characteristics of a pressure gradient on a barred beach, *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 136, 6, 327 - 336.
41. Oshnack, M. B., Aguiniga, F., Cox, D., Gupta, R., van de Lindt, J. (2009) "Effectiveness of small onshore seawalls in reducing forces induced by tsunami bore: Large-scale experimental study" *J Disaster Research*, 4, 6, 382 – 390.
42. Van de Lindt, J.W., Gupta, R., Cox, D., Wilson, J.S. (2009) "Wave impact study on residential building," *J Disaster Research*, 4, 6, 419 – 426.
43. Scott, N.V., Hsu, T.-J., and Cox, D. (2009) "Steep wave, turbulence, and sediment concentration statistics beneath a breaking wave field and their implications for sediment transport," *Continental Shelf Research*, 29, 2303-2317.
44. Suzuki, T., Mori, N., Cox, D.T. (2009) "Statistical modeling of near-bed pressure gradients on a natural beach," *Coastal Engineering Journal*, 51, 20, 101 –121.
45. Baldock, T., Cox, D., Maddux, T., Killian, J., Fayler, L. (2009) "Kinematics of breaking tsunami wavefronts: A data set from large scale laboratory experiments", *Coastal Engineering* 56 (5), 506-516.
46. Yim, S., Cox, D.T., and Park, M. (2009) "Experimental and Computational Activities at the Oregon State University NEES Tsunami Research facility," *Science of Tsunami Hazards*, 28, 1, 1-14.
47. Suzuki, T., Sungwon, S., Mori, N. and Cox, D.T. (2008) "Statistical modeling of pressure gradient on a barred beach," *Coastal Engineering Journal*, 50, 2, 123-142.
48. Shin, S., Cox, D. T. (2006) "Laboratory observations of inner surf and swash zone hydrodynamics on a steep slope." *Continental Shelf Research* 26, 561 – 573.

49. Suh, K.D., Shin, S., and Cox, D.T. (2006) "Hydrodynamic characteristics of pile-supported vertical wall breakwaters." *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 2, 83 – 96.
50. Scott, C.P., D.T. Cox, T.B. Maddux, and J.W. Long. (2005) "Large-scale laboratory observations of turbulence on a fixed barred beach," *Meas. Sci. Technol.* 16, 1903-1912.
51. Mori, N. and Cox, D.T. (2003) "Statistical modeling of overtopping for extreme waves on fixed deck," *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 129 (4): 165-173.
52. Mori, N. and Cox, D.T. (2003) "Dynamic properties of green water event in the overtopping of extreme waves on a fixed deck," *Ocean Engineering*, 30 (16): 2021-2052.
53. Cox, D.T., and Shin, S. (2003) "Laboratory measurements of void fraction and turbulence in the bore region of surf zone waves," *Journal of Engineering Mechanics*, 129(10), 1197-1205.
54. Cox, D.T., and Ortega, J.A. (2002) "Laboratory measurements of green water overtopping a fixed deck," *Ocean Engineering*, 29, 1827-1840.
55. Cox, D.T., Tissot, P., and Michaud, P., (2002) "Water level observations and short-term predictions including meteorological events for the entrance of Galveston Bay, Texas," *Journal of Waterway, Port, Coastal, and Ocean Engineering*. 128, 1, 21-29.
56. Cox, D.T. and Anderson, S.L., (2001) "Statistics of intermittent surf zone turbulence and observations of large eddies using PIV," *Coastal Engineering Journal*, 43, 2, 121-131.
57. Cox, D.T. and Scott, C.P., (2001) "Exceedance probability for wave overtopping on a fixed deck," *Ocean Engineering*, 28, 707-721.
58. Cox, D.T. and Kobayashi, N. (2000) "Identification of Intense, Intermittent Coherent Motions under Shoaling and Breaking Waves," *Journal of Geophysical Research*, 105, C6, 14223-14236.
59. Cox, D.T. and Kobayashi, N. (1998) "Application of an Undertow Model to Irregular Waves over Plane and Barred Beach," *Journal of Coastal Research*, 14 (4), 1314-1324.
60. Cox, D.T. and Kobayashi, N. (1997) "Kinematic Undertow Model with Logarithmic Boundary Layer," *Journal of Waterway, Port, Coastal, and Ocean Engineering*, ASCE, 123 (6), 354-360.
61. Cox, D.T. and Kobayashi, N., and Okayasu, A. (1996) "Bottom Shear Stress in the Surf Zone," *Journal of Geophysical Research*, 101 (C6), 14337-14348.
62. Kobayashi, N., Cox, D.T., and Wurjanto, A. (1991) "Permeability Effects on Irregular Wave Runup and Reflection," *Journal of Coastal Research*, 7(1), 127-136.
63. Kobayashi, N., Cox, D.T., and Wurjanto, A. (1990) "Irregular Wave Reflection and Runup on Rough Impermeable Slopes," *Journal of Waterway, Port, Coastal, and Ocean Engineering*, ASCE, 116(6), 708-726.
64. Kobayashi, N., Wurjanto, A., and Cox, D.T. (1990) "Irregular Waves on Rough Permeable Slopes," *Journal of Coastal Research*, SI(7), 167-184.

## 6.2 Chapters in Books

1. Mori, N., Kakuno, S. Cox, D., (2009) "Aeration and Bubbles in the Surf Zone," *Handbook of Coastal and Ocean Engineering*, Y.C. Kim (ed.), 115 – 130.

2. Briggs, M., Yeh, H., Cox, D. (2009) "Physical Modeling of Tsunami Waves," *Handbook of Coastal and Ocean Engineering*, Y.C. Kim (ed.), 1073 – 1106.

### 6.3 Conference Proceedings

1. Xiong, Y., Liang, Q., Amouzgar, R., Cox, D., Mori, N., Wang, G., Zheng, J. (2016) "High-Performance Simulation of Tsunami Inundation and Impact on Building Structures," ISOPE.
2. Zhou, Z., Hsu, T.-J., Cox, D., Liu, X., (2015) "Large Eddy simulation of wave-breaking induced turbulent coherent structure and suspended sediment transport on a barred beach," Conference on Model Integration across Disparate Scales in Complex Turbulent Flow Simulation, Penn State, June 15-17.
3. Cox, D., Park, H., Mostafizi, A., Wang, H., and Cramer, L. "Tsunami Inundation Modeling for Life Safety and Civil Infrastructure Damage: Application to the Cascadia Subduction Zone and Newport, Oregon" *Coastal Structures and Solutions to Coastal Disasters Joint Conference*, ASCE/COPRI, Boston, Sept. 9 – 11, 2015 (abstract submitted).
4. Wang, H., Mostafizi, A., Cox, D. (2014) "A Multimodal Near-field Tsunami Evacuation: An Agent-based model simulation of Seaside, Oregon," *International Conference on Evacuation Modeling and Management*, (abstract submitted).
5. Park, H., Cox, D. Wiebe, D., (2014) "Tsunami Inundation Modeling: Sensitivity of Velocity and Momentum Flux to Bottom Friction with Application to Building Damage at Seaside, Oregon," *International Conference on Coastal Engineering*, ASCE (in press).
6. Shin, S., Yoon, H.D., and Cox, D. (2014) "Large-scale laboratory experiments and numerical simulations of cross-shore morphological changes under erosive and accretive beach conditions," *International Conference on Coastal Engineering*, ASCE (in press).
7. Yoon, H.D., Cox, D.T., Albert, D.A., Mori, N., Smith, H., P. Blackmar (2014) "Vertical structure of wave induced currents, orbital velocity, and turbulence observed in natural vegetation," *International Conference on Coastal Engineering*, ASCE (in press).
8. Higgins C., Lehrman, J., Bradner, C. Schumacher, T., Cox, D. (2013) "Hybrid Testing of a Prestressed Girder Bridge to Resist Wave Forces," *Proceedings 29<sup>th</sup> US-Japan Bridge Engineering Workshop*, Tsukuba, Japan.
9. Blackmar, P., Cox, D., Albert, D., Mori, N., Smith, H., Wu, W.-C. (2013) "Full-scale Experiment and Numerical Model Investigation of Wave Height Attenuation through Emergent Vegetation," *Proc. of National Coastal Conference of the American Shore and Beach Preservation Association*, Texas.
10. Ko, H., Cox, D.T., Riggs, R., Naito, C., Kobayashi, M., "Hydraulic Experiments on Impact Forces from Tsunami-Driven Debris," Conference Proceedings, Network for Earthquake Engineering Simulation (NEES) *Quake Summit 2013*, Reno, NV.
11. Shin, S., Cox, D., Shin, B., Kim, K. (2013) "Numerical modeling of wave loads on bridge superstructures in comparisons with large-scale laboratory experiments" *12th International Coastal Symposium*, April, UK.
12. Park, S., van de Lindt, R.J.W, Gupta, R., and Cox, D.T. (2013) "Fragility risk assessment and methodology for cascading earthquake-tsunami hazard," *Conference of the Engineering Mechanics Institute*, ASCE.

13. Yoon, H., Shin, S., Cox, D., Pyun, C. (2013) "Numerical Simulation of Hydrodynamics in the Surf Zone over a Moveable Bed in CROSSTEX Experiment" *23th International Ocean and Polar Engineering Conference*, July, 2013, Alaska, USA.
14. Riggs, H. R., Cox, D. T., Naito, C. J., Kobayashi, M. H., Piran Aghl, P., Ko, H. T.-S. and Khowitar, E. (2013). 'Water-driven debris impact forces on structures: experimental and theoretical program', *32nd Intl. Conf. on Ocean, Offshore and Arctic Engineering*, ASME, OMAE2013-11128.
15. Shin, S., Lee, K.-H., Park, H., Kim, K., and Cox, D.T. (2012) "Influence of Infrastructure on Tsunami Inundation in a Coastal City: Laboratory Experiments and Numerical Simulation," *International Conference on Coastal Engineering*, ASCE.
16. Yoon, H.D. and Cox, D.T. (2012) "Intermittent Characteristics of Turbulence and Sediment Suspension in the Surf Zone: Observations and Predictions," *International Conference on Coastal Engineering*, ASCE.
17. Schumacher, T.A. and Cox, D.T. (2011) "Dynamic Response of a Large Scale Prestressed Concrete Girder Bridge Subjected to Hurricane Wave Forces," American Concrete Institute, Tampa Bay, FL.
18. Higgins, C.C., and Cox, D.T. (2011) "Behavior of Superstructure to Substructure Connections under Simulated Hurricane Wave Induced Loads," American Concrete Institute, Tampa Bay, FL.
19. Bridges, K., Cox, D.T., Thomas, S., Shin, S., Rueben, M. (2011) "Large-Scale Wave Basin Experiments on the Influence of Large Obstacles on Tsunami Inundation Forces," *Coastal Structures '11*, ASCE, Yokohama, Japan (CD ROM).
20. Yoon, H.D., Cox, D.T., Albert, D.A., Mori, N., Smith, H. (2011) "Ecological Modeling of Emergent Vegetation for Sustaining Wetlands in High Wave Energy Coastal Environments," *Coastal Structures '11*, ASCE, Yokohama, Japan (CD ROM).
21. Chakrabarti, A., H. D. Smith, H.D., Cox, D., Albert, D. (2011) "Field scale investigation of the interaction of sediment and turbulent structures in an emergent vegetative layer under wave forcing," *Coastal Sediments*.
22. Aguiñiga, F., Cox, D.T., Gupta, R., Jaiswala, M., Sai, J.O., and van de Lindt, J.W., (2010) "Experimental Study of Tsunami Forces on Structures," *Engineering Mechanics Institute Conference*, EMI 2010, 89-90.
23. Schumacher, T., Higgins, C., Bradner, C., Cox, D. (2010) "Dynamic Response of a Large-Scale Prestressed Concrete Girder Bridge Subjected to Hurricane Wave Forces" American Concrete Institute conference (CD ROM).
24. Higgins, C., Lehrman, J.B., Cox, D. (2010) "Behavior of Superstructure-to-Substructure Connections Under Simulated Hurricane Wave Induced Loads" American Concrete Institute conference (CD ROM).
25. Wilson, J., Gupta, R., van de Lindt, J., Cox, D. (2010) "Surge Wave Loading on Wood Structures," Proceedings of the 53rd International Convention of the Society of Wood Science and Technology, October 11-15, 2010, Geneva, Switzerland.
26. Rhinefrank, K., Schacher, A., Prudell, J., Cruz, J., Jorge, N., Stillinger, C., Naviaux, D., Brekken, T., von Jouanne, A., Newborn, D., Yim, S., Cox, D. (2010) "Numerical and experimental analysis of a novel wave energy converter," *International Conference on Offshore Mechanics and Arctic Engineering*.



27. Rhinefrank, K., Schacher, A., Prudell, J., Naviaux, D., Stillinger, C., Brekken, T., von Jouanne, A., Newborn, D., Yim, S., Cox, D. (2010) "High resolution wave tank testing of scaled wave energy devices," *International Conference on Offshore Mechanics and Arctic Engineering*.
28. Schumacher, T., Higgins, C., Bradner, C., Cox, D. (2009) "Large-scale laboratory wave flume experiments on highway bridge superstructures exposed to wave forces," *Structures Congress*, ASCE, Austin, TX.
29. Schumacher, T., Higgins, C., Bradner, C., Cox, D., Yim, S. (2008) "Large-Scale Wave Flume Experiments on Highway Bridge Superstructures Exposed to Hurricane Wave Forces," 6th National Seismic Conference on Bridges and Highways, Charleston, South Carolina.
30. Schumacher, T., Higgins, C., Bradner, C., Cox, D. (2008) "New innovative large-scale laboratory setup for experiments on highway bridge superstructures exposed to wave forces," *Concrete Bridge Conference*, St. Louis, Missouri, National Concrete Bridge Council, 1421 – 1432.
31. Cox, D.T., Tomita, T., Lynett, P., Holman, R.A. (2008) "Tsunami inundation with macro-roughness in the constructed environment," *31st International Conference on Coastal Engrg*, ASCE, 1421 – 1432.
32. Bradner, C., Schumacher, T., Cox, D.T., and Higgins, C. (2008) "Large-scale laboratory measurements of wave forces on highway bridge superstructures," *31st International Conference on Coastal Engrg*, ASCE, 3554 – 3566.
33. Scott, C.P., Cox, D.T., Shin, S., and Maddux, T.B. (2006) "The Role of Wave Breaking Turbulence in Sediment Suspension Observed During CROSSTEX," *30th International Conference on Coastal Engrg*, ASCE, 2537 – 2546.
34. Shin, S., Cox, D.T., Kim, I.C., Yim, S. (2006), "Wave Transformation, Impact, and Overtopping on a Rubble Mound Breakwater: Large-scale Measurements and Numerical Modeling," *30th International Conference on Coastal Engrg*, ASCE, 4580 – 4591.
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58. Sakai, T., Mase, H., Cox, D.T., and Ueda, Y. (1993), "Field Observation of Wave-Induced Porewater Pressures," *Proc. of 3rd International Offshore and Polar Engineering Conf.*
59. Cox, D.T., Kobayashi, N., and Wurjanto, A. (1992) "Irregular Wave Transformation Processes in Surf and Swash Zones," *Proc. of 23rd International Conference on Coastal Engrg.*, ASCE, 1, 156-169.
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63. Sakai, T., Mase, H., Cox, D.T., and Ueda, Y. (1991) "Field Observation of Wave-Induced porewater Pressure in Seabed," *Proc. of 38th Japanese Conference on Coastal Engrg.*, JSCE, 816-820, (in Japanese).
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#### **6.4 Magazine Articles**

1. Naito, C., Cox, D.T., and Yu, Q.-S. (2011) "Impact of tsunami generated debris during the 2011 Tohoku Japan Tsunami," *Structural Engineer*, November issue.

### **7. Conference Presentations and Invited Lectures and Presentations**

#### **7.1 Conference Presentations**

1. "Tsunami Inundation Modeling for Life Safety and Infrastructure Damage: Application to the Cascadia Subduction Zone and Seaside, Oregon," *Joint Conference of Solutions to Coastal Disasters and Coastal Structures '15*, Boston, 2015.
2. "Tsunami Inundation Modeling: Sensitivity of Velocity and Momentum Flux to Bottom Friction with Application to Building Damage at Seaside, Oregon," *34th International Conference on Coastal Engrg*, Seoul, Korea, 2014.
3. "Observations and Predictions of Intermittent Sediment Suspension in the Surf Zone," *3rd International Symposium on Rip Current*, Busan, Korea, 2014.
4. "Intermittent Turbulence and Sediment Suspension in the Surf Zone and Implications for Onshore Sediment Transport," *Ocean Sciences*, AGU, Salt Lake City, 2012.
5. "Large-Scale Wave Basin Experiments on the Influence of Large Obstacles on Tsunami Inundation Forces," *Coastal Structures '11*, ASCE, Yokohama, Japan, 2011.
6. "Tsunami inundation with macro-roughness in the constructed environment," *31st International Conference on Coastal Engrg*, Hamburg, Germany, 2008.

7. "The role of vertical evacuation in saving lives in tsunami disasters," *Network for Earthquake Engineering Annual Meeting*, Portland, OR, 2008.
8. "NEES Tsunami Facility Spotlight: Wavemaker facility enhancement for large-scale testing of tsunami and hurricane wave forces," *Network for Earthquake Engineering Annual Meeting*, Portland, OR, 2008.
9. "Pore-pressure in rubble mound structures: RANS modeling and comparisons to large-scale experiments," *Coastal Structures '07*, Venice Italy, 2007.
10. "The Role of Wave Breaking Turbulence in Sediment Suspension Observed During CROSSTEX," *27th International Conference on Coastal Engrg*, San Diego, California, 2006.
11. "NEES Multidirectional Wave Basin for Tsunami Research," *Coastal Structures '03*, Portland, Oregon, 2003.
12. "Observations and Predictions of Tides and Storm Surges Along the Gulf of Mexico," *Waves '01*, San Francisco, California, 2001.
13. "Local and Remote Forcing of Subtidal Water Level and Setup Fluctuations in Coastal and Estuarine Environments," *Coastal Dynamics '01*, Lund, Sweden, 2001.
14. "Bottom Stress in the Inner Surf and Swash Zone," *27th International Conference on Coastal Engrg*, Sydney, Australia, 2000.
15. "Coherent Motions in the Bottom Boundary Layer under Shoaling and Breaking Waves," *26th International Conference on Coastal Engrg.*, Copenhagen, Denmark, 1998.
16. "Application of an Undertow Model to Irregular waves on Barred Beaches and Reflective Coastal Structures," *26th International Conference on Coastal Engrg.*, Copenhagen, Denmark, 1998.
17. "Undertow Profiles in the Bottom Boundary Layer under Breaking Waves," *25th International Conference on Coastal Engrg*, Orlando, Florida, 1996.
18. "Bottom Shear Stress and Undertow Profile Measurements Under Breaking Waves," *American Geophysical Union, Fall Meeting*, San Francisco, 1995.
19. "Vertical Variations of Fluid Velocities and Shear Stress in Surf Zones," *24th International Conference on Coastal Engrg.*, Kobe, Japan, 1994.
20. "Numerical Model Verification using SUPERTANK Data in Surf and Swash Zones," *Coastal Dynamics '94*, Barcelona, Spain, 1994.
21. "Irregular Wave Transformation Processes in Surf and Swash Zones," *23rd International Conference on Coastal Engrg.*, Venice, Italy, 1992.
22. "Effects of Fluid Accelerations on Sediment Transport in Surf Zones," *Coastal Sediments '91*, Seattle, Washington, 1991.

## **7.2 Invited Seminars and Presentations**

1. "Should I Stay or Should I go? Tsunami Evacuation and Decision-Making for the M9 Cascadia Subduction Zone Event." Keynote presentation for the *2015 Science on a Sphere Users Collaborative Network Workshop*, Portland, OR, 2015.
2. "Modeling of Tsunami Inundation in Urban Waterfront Areas," *Kyoto University*, Japan, 2011.

3. "Modeling of Tsunami Inundation in Urban Waterfront Areas," *Naha University*, Okinawa, Japan, 2011.
4. "Ecological Modeling of Emergent Vegetation in High Wave Energy Coastal Environments," *Naha University*, Okinawa, Japan, 2010
5. "Modeling of Tsunami Inundation in Urban Waterfront Areas," *Kagoshima University*, Japan, 2011.
6. "Ecological Modeling of Emergent Vegetation in High Wave Energy Coastal Environments," *Kagoshima University*, Japan, 2010
7. "Modeling of Tsunami Inundation in Urban Waterfront Areas," *Central Research Institute of the Electric Power Industry*, Tokyo, Japan, 2010.
8. "Modeling of Tsunami Inundation in Urban Waterfront Areas," *Port and Airport Research Institute*, Japan, 2010.
9. "Modeling of Tsunami Inundation in Urban Waterfront Areas," *Yokohama National University*, Japan, 2010.
10. "Ecological Modeling of Emergent Vegetation in High Wave Energy Coastal Environments," *Yokohama National University*, Japan, 2010
11. "Ecological Modeling of Emergent Vegetation in High Wave Energy Coastal Environments," *Kwandong University*, Korea, 2010
12. "Modeling of Tsunami Inundation in Urban Waterfront Areas," *Korean Coastal Engineering Conference*, Keynote Lecture, 2010.
13. "Modeling of Tsunami Inundation in Urban Waterfront Areas," *Nagoya University*, 2010.
14. "Large-Scale Laboratory Measurements of Hurricane Wave Forces on Highway Bridge Superstructures," *Louisiana State University*, 2008.
15. "The O.H. Hinsdale Wave Research Laboratory and NEES Tsunami Facility at Oregon State University," *Texas A&M University*, 2007.
16. "The O.H. Hinsdale Wave Research Laboratory and NEES Tsunami Facility at Oregon State University," *Hanyang University*, Seoul, Korea, 2006.
17. "The O.H. Hinsdale Wave Research Laboratory and NEES Tsunami Facility at Oregon State University," *Chonnam National University*, Yeosu, Korea, 2006.
18. "Tsunamis! Making Waves at Oregon State's O.H. Hinsdale Wave Research Laboratory," *The Science & Math Investigative Learning Experiences (SMILE) program*, 2006.
19. "Wave, Currents, and Regional Sediment Management at the Mouth of the Columbia River," *Oregon State University Council of Regents*, Astoria, Oregon, 2005.
20. "The Next Big Wave: Coastal and Ocean Engineering at Oregon State University," *ASCE Student Chapter Annual Dinner*, 2005.
21. "The Future of Coastal Engineering and Tsunami Research at Oregon State University," *Port and Airport Research Institute*, Japan, 2004.
22. "Coastal and Ocean Engineering Research and Education in Laboratory Wave Basins" *Oregon State University*, 2002.

23. "Relative Importance of Local and Remote Forcing on Subtidal Variability in Galveston Bay, Texas," *Marine Forecasters of Southern Region Workshop*, National Weather Service, Corpus Christi, TX, 2001.
24. "Intermittency in Surf Zone Turbulence," International Workshop on Wave Turbulence, *Cornell University*, Ithaca, NY, 1999.
25. "Intermittency in Surf Zone Turbulence," and "Bottom Shear Stress in the Surf and Swash Zone" *Disaster Prevention Research Institute*, Kyoto University, Uji, Japan, 1999.
26. "Coastal Engineering at Texas A&M University," and "Intermittency in Surf Zone Turbulence," *Central Research Institute of the Electric Power Industry*, Tokyo, Japan, 1999.
27. "Intermittency in Surf Zone Turbulence," and "Bottom Shear Stress in the Surf and Swash Zone," *Tokyo Institute of Technology*, Tokyo, Japan, 1999.
28. "Wave Breaking Turbulence and bottom boundary layer processes," *Woods Hole Oceanographic Institution*, Woods Hole, MA, 1999.
29. "Wave Breaking Turbulence and Sediment Suspension," *Naval Research Laboratory*, Stennis Space Center, MS, 1999.
30. "Bottom Shear Stress under Breaking Waves," *Woods Hole Oceanographic Institution*, Woods Hole, MA, 1995.
31. "Numerical and Experimental Modeling of Surf Zone Hydrodynamics," *U.S. Army Corps of Engineers*, Field Research Facility, Duck, NC, 1995.
32. "Numerical and Experimental Modeling of Surf Zone Hydrodynamics," *Yokohama National University*, Yokohama, Japan, 1994.
33. "Numerical and Experimental Modeling of Surf Zone Hydrodynamics," *Texas A&M University*, College Station, Texas, 1994.
34. "RBREAK: A Numerical Model for Random Waves Incident on Coastal Structures and Beaches," *U.S. Army Corps of Engineers, Waterways Experiment Station*, Coastal Engineering Research Center, Vicksburg, MS, 1992.
35. "Irregular Wave Reflection and Runup on Rough, Permeable Slopes," *Coastal Engineering Laboratory and Disaster Prevention Research Institute*, Kyoto University, Uji, Japan, 1989.

## **8. Funding: Competitive Grants and Testing**

### **8.1 Competitive Grants:**

1. "A Multidisciplinary, Integrative Approach to Valuing Ecosystem Services from Natural Infrastructure," NOAA/NOS, \$1,350,000; 2015-2016, S. Dundas (PI), D. Cox, S. Hacker, D. King, D. Lewis, C. Parrish, P. Ruggiero.
2. "Experimental and Numerical Study to Improve Damage and Loss Estimation Due to Overland Wave and Surge Hazards on Near-Coast Structures," Department of Homeland Security, \$500,000; 2016-2020, D. Cox (PI, OSU Lead), J. van de Lindt (CSU)
3. "NIST Center for Risk-Based Community Resilience Planning," National Institute of Standards and Technology (subcontract to Colorado State University), \$1,147,532; 2015-2019, D. Cox (PI, OSU Lead), A. Barbosa, M. Scott.

4. "Building Resilient Coastal Communities: A Social Assessment of Mobile Technology for Tsunami Evacuation Planning," Oregon Sea Grant, \$123,926, L. Cramer (PI), D. Cox, H. Wang.
5. "Collaborative Research: Large-scale laboratory investigation and numerical modeling of sheet flow sediment transport dynamics across a surf zone sand bar," National Science Foundation, \$421,654, 2014-2017, D. Cox (PI)
6. "Collaborative Research: Fundamental Mechanics and Conditional Probabilities for Prediction of Hurricane Surge and Wave Loads on Elevated Coastal Structures," National Science Foundation, \$210,000, 2013-2016, D. Cox (PI).
7. "An Integrated Engineering-Economic Vulnerability Assessment Tool to Increase Tsunami Preparedness in Rural Coastal Counties," Oregon Sea Grant, \$190,000, 2012-2014, Y. Chen (PI), D. Cox, P. Corcoran, B. Webber.
8. "NEESR-CR: Impact Forces from Tsunami-Driven Debris," National Science Foundation, \$963,111, 2010-2013, R. Riggs (UH, PI), D. Cox, C. Naito (Lehigh), M. Kobayashi (UH).
9. "Ecological modeling of emergent vegetation for sustaining wetlands in high wave energy coastal environments," National Science Foundation, \$300,000, 2009-2012, D. Cox (PI) and D. Albert.
10. "NEESR II: Mitigating the Risk of Coastal Infrastructure through understanding Tsunami-Structure Interaction and Modeling," National Science Foundation, \$375,000, 2008-2011, D. Cox (PI), R. Gupta, J. van de Lindt (CSU), F. Aguiniga (TAMU-K).
11. "Hurricane Wave Forces on Highway Bridge Superstructure: Pseudo-dynamic Testing for Bridge Subassembly," Oregon Transportation Research and Education Consortium, \$100,000, 2009, D. Cox.
12. "Coupled Hydraulic-Structural Testing to Improve Highway Bridge Performance Under Extreme Hurricane Wave Loads," National Science Foundation, \$100,000, 2008-2010, D. Cox (PI), C. Higgins, S. Yim.
13. "MRI: Acquisition of a Large-Stroke, Piston-Type Wavemaker for Coastal Hazards Research and Education," National Science Foundation, \$1,132,800, 2008-2009, D. Cox (PI), T. Ozkan-Haller, A. von Jouanne, S. Yim.
14. "Hurricane Wave Forces on Highway Bridge Superstructure: Repair and Retrofit of Existing Bridges," Oregon Transportation Research and Education Consortium, \$75,000, 2008, D. Cox.
15. "Hurricane Wave Forces on Highway Bridge Superstructures," Oregon Transportation Research and Education Consortium, \$50,000, D. Cox, 2007.
16. "Physical and numerical modeling of intensity-based tsunami inundation," Oregon Sea Grant, \$170,000, 2007-2009, D. Cox.
17. "Large Scale Laboratory Tests of Coastal Dune Erosion," Oregon Sea Grant, \$170,000, 2006-2008, P. Ruggiero (PI), T. Maddux, D. Cox.
18. "Maintenance and Operation of NEES Tsunami Wave Research Facility," NEES Consortium, Inc., \$4,547,906, 2004-2008, S. Yim (PI), D. Cox, C. Pancake, H. Yeh.
19. "NEES Instrumentation Acquisition for the Tsunami Wave Basin" National Science Foundation, \$250,000, 2004-2005. D. Cox (PI), H. Yeh, S. Yim.

20. "Collaborative Research: CROSSTEX - Wave breaking and boundary layer processes and the resulting sediment suspension in the surf zone," National Science Foundation, \$382,228, 2004-2008, D. Cox.
21. "Numerical and Physical Model Study of Cobble Berms," Oregon Sea Grant, \$37,993, 2004-2005, D. Cox.
22. "Scientific Synthesis in Support of the Columbia Near-shore Beneficial Use of Dredged Material Project" \$99,020, 2004-2005, G. Achterman (PI), R. Davis-Born, D. Cox.
23. "REU-Site: Interdisciplinary Approaches to Coastal Processes and Hazard Mitigation," National Science Foundation, \$287,722, 2003-2005, D. Cox (PI), M. Haller, C. Pancake.
24. "Incorporating meteorological forecasts to nowcast/forecast water level anomalies in navigable waterways of the northwestern Gulf of Mexico," Sea Grant, \$181,838, 2003-2005, D. Cox (PI), P. Tissot, P. Michaud.
25. "Upgrading Oregon State's Multidirectional Wave Basin for Remote Tsunami Research," National Science Foundation, \$4,775,832, 2001-2004, S. Yim (PI), D. Cox, C. Pancake, H. Yeh.
26. "A Fundamental Upgrade of the Texas Coast Water Level Forecasting System," Texas Coastal Coordination Council, \$153,692, 2001-2003, P. Michaud (PI), P. Tissot, D. Cox.
27. "Proposal to Investigate Shoreline Erosion in Jefferson County, Texas," Jefferson County, Texas, \$164,202, 1998-1999, B. Edge (PI), D. Cox.
28. "NSF Career Award: Experimental and Numerical Modeling of Coastal Boundary Layer Processes Induced by Shoaling and Breaking Surface Gravity Waves," National Science Foundation, \$210,000, 1998-2002, D. Cox.
29. "Field Observations of the Three-Dimensional Flow Structure and Sediment Movement in the Surf Zone," Japan Society for the Promotion of Science, \$7,300, 1999, D. Cox.
30. "Research Experience for Undergraduate Program (Joshua Carter) – Supplement to NSF Career Award," National Science Foundation, 1999, D. Cox.
31. "Matching Support for Pacific International Testing," National Science Foundation, \$15,000, 1999-2000, D. Cox.
32. "Remediation of Contaminated Sediments in Lavaca Bay, Texas: Physical Modeling of Nearshore Sediment Suspension," Energy Resource Program Texas A&M University, \$16,800, 1999, D. Cox.
33. "Education and Student Research in Offshore Tin Mining," National Science Foundation, \$67,950, 1997-1999, B. Edge (PI), D. Cox, M. Kim, R. Randall.

## **8.2 Testing Projects**

1. "Physical Model Testing of Levee Overtopping for Jackson State University," Jackson State University, \$207,512, 2009.
2. "Physical Model Testing of Columbia Power Buoy," Columbia Power Technology, \$60,176, 2009.
3. "Physical Model Testing for Lightweight Modular Causeway System, Phase 2," US Army Corps of Engineers, \$28,818, 2009.
4. "Physical Model Testing of Sealift Cargo Movement Technology (SCMT)," Oceaneering, \$62,495, 2009.



5. "Physical Model Testing for Northstar Renewal Project," PND Engineers / BP, \$549,900, 2008.
6. "Physical Model Study of Hyperion Outfall", Parsons/E2 Engineers, \$40,360, 2007.
7. "Physical Model Testing for Hurricane Impact on Dune Protection," US Army Corps of Engineers – ERDC, \$60,000, 2006.
8. "Physical Model Testing for Dune Scarping and Overwash," Oregon Sea Grant, \$19,000, 2006.
9. "Physical Model Testing for Lightweight Modular Causeway," US Army Corps of Engineers, \$30,000, 2006.
10. "Physical Model Testing for Riprap Stability and Impact Pressure, Santee Cooper Slope Protection Project, Phase II," Paul C. Rizzo Associates, Inc., \$59,280, 2006.
11. "Physical Model Testing for Riprap Stability and Impact Pressure, Santee Cooper Slope Protection Project," Paul C. Rizzo Associates, Inc., \$83,206, 2006.
12. "Physical Model Study of Stability, Runup and Overtopping for Oooguruk Production Island," Coastal Frontiers Corporation, \$57,880, 2005.
13. "Physical model testing for swash dynamics as part of the Cross-shore Sediment Transport Experiment (CROSSTEX) project," Philip Liu (Cornell U.), Edwin Cowen (Cornell U.), \$30,000, 2005.
14. "Physical model testing for Bar Migration as part of the Cross-shore Sediment Transport Experiment (CROSSTEX) project," Tuba Ozkan-Haller, Merrick Haller, James Kirby (Univ. Delaware), \$50,000, 2005.
15. "Physical model testing for Wave Breaking as part of the Cross-shore Sediment Transport Experiment (CROSSTEX) project," D. Cox, Tom Hsu (U. Fla), Diane Foster (Ohio State), Tim Stanton (NPGS), John Trowbridge (WHOI), Don Slinn (U. Fla), \$40,000, 2005
16. "Physical Model Testing for Jetty Extension at Keystone Harbor, WA, Phase II," Coast and Harbor Engineering, \$70,000, 2005.
17. "Physical Model Study of Wave Runup and Overtopping for El Sauzal Graving Dock Breakwater" Coastal Frontiers Corporation, \$60,124, 2004
18. "Physical Model Testing for Jetty Extension at Keystone Harbor, WA, Phase I," Coast and Harbor Engineering, \$139,986, 2004.
19. "Landslide generated tsunami, Phase 3," Fredric Raichlen, California Institute of Technology, \$20,000, 2004.
20. "Model testing for Phase 3 (Defender) floating breakwater," Coast & Harbor Engineering, \$15,205, 2003.
21. "Model testing for a floating breakwater at Bremerton, WA. Phase 1 and 2" Coast & Harbor Engineering, \$27,850, 2003.
22. "Scale model tests of instrument tripod for the Mouth of the Columbia River," USACE – Portland District, \$6,000, 2003.
23. "Landslide generated tsunami, Phase 2," Fredric Raichlen, California Institute of Technology, \$19,000, 2003.
24. "Testing Agreement Between TEES and Pacific International Engineering," Pacific International Engineering, Inc., \$15,000, 1999.

25. "Shoreline Protection for Dredge Island: Physical Model Testing," Aluminum Company of America, Point Comfort Operations, (B. Edge, PI), \$169,535, 1996.

## **9. Collaborators, Graduate and Undergraduate Research Students, and Advisor**

### **9.1 Graduate students (\* expected date of graduation)**

1. Dylan Anderson, Ph.D., 2018\*
2. Hyoungsu Park, Ph.D., 2016\*
3. Wei Chen Wu, Ph.D., 2015
4. Jason Kiel, M.E., 2015
5. Harrison Ko, M.Sc., 2013
6. Dane Weibe, M.Sc., 2013
7. Philip Blackmar, M.Sc., 2013
8. Hendrick Schoeman, M.Sc., 2012
9. Hyung Doug Yoon, Ph.D., 2011
10. Kerri Bridges, M.Sc., 2011
11. Seth Thomas, M.Sc., 2011
12. Mary Beth Oshnack, M.Oc.E., 2010
13. David Newborn, M.Oc.E., 2009
14. Grady Donovan, M.Sc., 2008
15. Christopher Bradner, M.Oc.E., 2008
16. Charles Bisgard, M.Sc., 2006
17. Shingo Ichikawa, M.Oc.E., 2006
18. Christopher Scott, M.Oc.E., 2005
19. Sungwon Shin, Ph.D., 2005
20. Eileen Crawford, M.Sc., 2005
21. Brady Richmond, M.Oc.E., 2005
22. Joel Darnell, M.Oc.E., 2004
23. Young-Joo Nam, M.S., 2002
24. Gregory Guannel, M.S., 2001
25. Francis Way, M.S., 2000
26. Ashok Sukumaran, M.S., 2000
27. William Hobensack, M.S., 1999
28. Victor Ginting, M.S., 1998
29. Olga Pattipawaej, M.S., 1998
30. Joel Rathbun, M.S., 1998 (Co-advisor)
31. Douglas Kennedy, M.S., 1998
32. Luis Moreno, M.E., 1997 (Co-Adviser)
33. Brad Schwichtenberg, M.E., 1997 (Co-advisor)

### **9.2 Undergraduate research students**

1. Nanami Noguchi, Japan exchange student, 2015
2. Narumi Kon-no, Japan exchange student, 2015
3. Yuya Hanai, Japan exchange student, 2014
4. Saki Kawano, Japan exchange student, 2014
5. Masahiro Sagehashi, Japan exchange student, 2013
6. Taihei Akatsuka, Japan exchange student, 2013
7. Koutaro Anahara, Japan exchange student, 2013
8. Jasmine Pahukula, NSF REU, 2013
9. Emily Flock, NSF REU EISI Site, 2012

10. Sarah Vallejo, NSF REU EISI Site, 2012
11. Latifa Salih, NSF REU EISI Site, 2012
12. Amy Kordosky, OSU Honors, 2012-13, NSF REU Supplement, 2012
13. Patrick Basal, NSF REU NEES Site, 2012
14. Manuel Garcia Castano, 2012
15. Matt Rueben, OSU Honors, 2011-13
16. Brittany Snyder, OSU Honors, 2010-11, Sea Grant, 2007
17. Sean Lagunas, NSF REU EISI Site, 2010
18. Hayden Ausland, NSF REU EISI Site, 2010
19. Jose Lonzano, NSF NEES project, 2010
20. Lindsay Croghan, NSF REU Supplement, 2009
21. Francisco Galan, NSF REU NEES Site, 2009
22. Manuel Guerra, NSF NEES project, 2009
23. Sarah E. Criswell, NSF REU HWRL Site, 2005
24. Meghan Irving, NSF REU HWRL Site, 2005
25. James Lynch, NSF REU HWRL Site, 2005
26. Christie Mills, NSF REU HWRL Site, 2004
27. Erin Lucas, NSF REU HWRL Site, 2004
28. James Galloway, NSF REU HWRL Site, 2004
29. William Boylston, NSF REU HWRL Site, 2004
30. Nathan Papini, NSF REU HWRL Site, 2003
31. Neil Clayton, NSF REU HWRL Site, 2003
32. Adrojan Spencer, NSF Summer REU Program, 2001
33. Jose Alberto Ortega, EPO Summer Research, 2000
34. Joel Darnell, NSF REU Program, 2000
35. Josh Carter, NSF REU Program, 1999
36. Christopher Scott, NSF REU Program, 1999
37. Hunter Taylor, NSF REU Program, 1998
38. Josh Carter, NSF REU Program, 1997
39. Douglas Kennedy, NSF REU Program, 1996

### **9.3 High School Teacher research assistants**

1. Michael Patterson, Junipero Serra HS, San Mateo, CA, RET Supplement, 2012
2. Dave Tolle, Sweet Home HS, Sweet Home, OR, RET Supplement, 2009
3. Ann Knight, Sweet Home HS, Sweet Home, OR, RET Supplement, 2009