

David Foster Hill

School of Civil and Construction Engineering
207 Owen Hall, Corvallis, OR, 97331
541.737.4939 (ph)
541.737.3052 (fx)
david.hill@oregonstate.edu

Education

1997	Ph.D., Civil and Environmental Engineering, University of California, Berkeley
1994	M.S., Civil and Environmental Engineering, University of California, Berkeley
1993	B.A., Aeronautical and Astronautical Engineering, University of Illinois, Urbana / Champaign

Experience

2016 - Present	Professor, Oregon State University, Civil and Construction Engineering
2010 –2016	Associate Professor, Oregon State University, Civil and Construction Engineering
2004 –2009	Associate Professor, The Pennsylvania State University, Civil and Environmental Engineering
Summer 2008, 2009	Visiting Researcher, Technical University of Delft (Netherlands)
1999 – 2004	Assistant Professor, The Pennsylvania State University, Civil and Environmental Engineering
Summer 2000	Visiting Professor, University of Illinois, Urbana / Champaign, Theoretical and Applied Mechanics
1998	Postdoctoral Researcher, University of Illinois, Urbana / Champaign, Theoretical and Applied Mechanics
1998	Postdoctoral Researcher, Purdue University, Civil and Environmental Engineering
1997	Lecturer, University of California, Berkeley, Civil and Environmental Engineering
1997 - 1997	Lecturer, San Francisco State University
1995	Visiting Researcher, Delft Hydraulics (Netherlands)

professional service and affiliations

- Member, Science Panel, North Pacific Research Board, 2016 – present
- Associate Editor, Journal of Coastal Research, 2014 - present
- Associate Editor, Journal of Hydraulic Engineering, 2013 – present
- Conference Co-Chair, Hydraulic Measurements and Experimental Methods Conference, ASCE/EWRI, 2012, Salt Lake City, UT.
- ASCE COPRI Coastal and Estuarine Hydroscience Committee, 2015 – present.
- Member, American Geophysical Union Publications Committee, 2010-2012.
- Conference Co-Chair, Hydraulic Measurements and Experimental Methods Conferences, ASCE/EWRI, 2007, Lake Placid, NY.
- Member, ASCE Hydraulic Measurements and Experimental Methods Technical Committee, 2005 – present.
- Session Chair, CERF Annual Meeting, 2015, Portland, OR.
- Session Chair, 2012, 4th International Conference on Estuaries and Coasts, October, Hanoi, Vietnam.
- Session Chair, APS DFD Annual Meeting, 2000, Washington D.C.
- Session Chair, AGU Ocean Sciences Meeting, 2000, San Antonio, TX.
- Session Chair, Third International Workshop on Particle Image Velocimetry, 1999, Santa Barbara, CA.
- Member, American Physical Society, 1996 – present.
- Member, American Geophysical Union, 1996 – present.
- Member, American Society of Civil Engineers, 2004 – present.
- Proposal Reviewing: National Science Foundation, National Institute for Climate Change Research, American Chemical Society – Petroleum Research Fund, Civilian Research Defense Foundation.
- Journal Paper Reviewing: Journal of Hydraulic Research, Quarterly of Applied Mathematics, Zeitschrift fur Naturforschung, Measurement Science Technology, Journal of Fluid Mechanics, Experiments in Fluids, Journal of Waterway, Port, Coastal and Ocean Engineering, Journal of Fluids Engineering, Physics of Fluids, Environmental Fluid Mechanics, Journal of Engineering Mechanics, Canadian Journal of Zoology, Journal of Hydraulic Engineering, Industrial and Engineering Chemistry Research, Regular and Chaotic Dynamics, Journal of Engineering Mathematics, Limnology and Oceanography, Ocean Dynamics,

journal publications¹

¹ * denotes student author

1. Khan, N., Ashe, E., Horton, B.P., Dutton, A., Kopp, R.E., Brocard, G., Engelhart, S., Hill, D.F., Peltier, W.R., Vane, C.H., Scatena, F.N., 2016, "Drivers of Holocene sea-level change in the Caribbean," *Quaternary Science Reviews*, in press.
2. Mosier*, T., Hill, D.F., Sharp, K.V., 2016, "How Much Cryosphere Model Complexity is Just Right? Exploration Using the Conceptual Cryosphere Hydrology Framework," *The Cryosphere*, in press.
3. Hill, D.F., 2016, "Spatial and Temporal Variability in Tidal Range: Evidence, Causes and Effects," *Current Climate Change Reports*, doi:10.1007/s40641-016-0044-8.
4. Mosier*, T., Sharp, K.V., Hill, D.F., 2016, "The hydropower potential assessment tool (HPAT): evaluation of run-of-river resource potential for any global land area and application to Oregon, USA," *Renewable Energy*, doi:10.1016/j.renene.2016.06.002.
5. Beamer*, J., Hill, D.F., Arendt, A., Liston, G., 2016, "High-resolution modeling of coastal freshwater discharge and glacier mass balance in the Gulf of Alaska watershed," *Water Resources Research*, doi:10.1002/2015WR018457.
6. Hawkes, A.D., Kemp, A.C., Donnelly, J.P., Horton, B.P., Peltier, W.R., Cahill, N., Hill, D.F., Ashe, E., Alexander, C., 2016, "Relative sea-level change in northeastern Florida (USA) during the last ~8.0 ka," *QSR*, doi:10.1016/j.quascirev.2016.04.016.
7. Nikitina, D., Kemp, A.C., Englehart, S., Horton, B.P., Hill, D.F., Kopp, R.E., 2015, "Sea-level change and subsidence in the Delaware Estuary during the last ~2200 years" *Estuarine, Coastal and Shelf Science*, v.164, pp.506-519.
8. Cheng*, T., Hill, D.F., Read, W., 2015, "The contributions to storm tides in Pacific Northwest estuaries: Tillamook Bay, Oregon and the December 2007 Storm," *Journal of Coastal Research*, v.31(3), pp.723-734.
9. Cheng*, T., Hill, D.F., Beamer*, J., Garcia, G., 2015, "Climate change impacts on wave and surge processes in a Pacific Northwest (USA) estuary," *Journal of Geophysical Research*, v.120(1), pp.182-200.
10. Hill, D.F., Bruhis*, N., Calos*, S.E., Arendt, A., Beamer*, J., 2015, "Spatial and Temporal Variability of Freshwater Discharge into the Gulf of Alaska," *Journal of Geophysical Research*, v.120(2), pp.634-646.
11. Kalmbacher*, K., Hill, D.F., 2014, "The effects of tides and currents on tsunami propagation in large rivers: idealized cases and the Columbia River," *Journal of Waterway, Port, Coastal, and Ocean Engineering*, doi:10.1061/(ASCE)/WW.1943-5460.0000290.
12. Hill, D.F., 2014, "A simple model for the recirculation velocity of open-channel embayments," *Journal of Hydraulic Engineering*, v.140(4), doi:10.1061/(ASCE)HY.1943-7900.0000837. [[link](#)].
13. Mosier*, T., Hill, D.F., Sharp, K.V., 2014, "Very high resolution monthly climate surfaces with global land coverage," *International Journal of Climatology*, v.34(7), pp.2175-2188.
14. Arendt, A., Luthcke, S., Gardner, A., O'Neel, S., Hill, D.F., Abdalati, W., 2013 "Analysis of a GRACE global mascon solution for Gulf of Alaska Glaciers," *Journal of Glaciology*, v.59(217), doi:10.3189/2013JoG12J197.

15. Horton, B.P., Engelhart, S.E., Hill, D.F., Kemp, A., Nikitina, D., Miller, 2013, "Influence of local-scale processes on Holocene sea-level change, New Jersey," *Journal of Quaternary Science*, v.28(4), pp.403-411.
16. Hall*, G.F., Hill, D.F., Horton, B.P., Engelhart, S.E., Peltier, W.R., 2013, "A high-resolution study of tides in the Delaware Bay: past conditions and future scenarios," *Geophysical Research Letters*, v.40(2), pp.338-342.
17. Drew, G., Hill, D.F., Piatt, J.F., 2013, "Current effects and the role of tides in fine-scale use of marine bird habitats in a Southeast Alaska hotspot," *Marine Ecology Progress Series*, v.487, pp.275-286.
18. Bieniek, P., Bhatt, U., Thoman, R., Angeloff, H., Partain, J., Papineau, J., Fritsch, F., Holloway, E., Walsh, J., Daly, C., Shulski, M., Hufford, G., Hill, D.F., Calos*, S., Gens, R., 2012, "On revising the climate divisions for Alaska," *J. Applied Meteorology and Climatology*, v.51, pp.1276-1289.
19. Klaar, M., Maddock, I., Milner, A., Hill, D.F., 2011, "The dynamics of coarse woody debris within recently deglaciated streams in Glacier Bay National Park, Alaska," *Geomorphology*, v.130, pp.208-220.
20. Hill, D.F., Griffiths, S.D., Peltier, W.R., Horton, B.P., Tornqvist, T.E., 2011, "High-resolution numerical modeling of tides in the western Atlantic, Gulf of Mexico, and Caribbean Sea during the Holocene," *Journal of Geophysical Research*, v.116(C10014), 16pp.
21. Chenoweth, E., Gabriele, C., Hill, D., 2011, "Micro-scale tidal influences on humpback whale habitat selection," *Marine Ecology Progress Series*, v.423, pp.279-289.
22. de Vries, S., Hill, D.F., de Schipper, M., Stive, M.J.F., 2011, "Remote sensing of coastal waves using stereo imaging," *Coastal Engineering*, v.58(3), pp.239-250.
23. Hawkes, A.D., Horton, B.P., Nelson, A.R., Hill, D.F., 2010, "The application of intertidal foraminifera to reconstruct coastal subsidence during the giant Cascadia earthquake of AD 1700 in Oregon, USA," *Quaternary International*, v.221(1-2), pp.116-140.
24. Hill, D.F., Ciavola*, S., Etherington, L., Klaar, M., 2009, "Estimation of freshwater runoff into Glacier Bay, Alaska and incorporation into a tidal circulation model," *Estuarine, Coastal and Shelf Science*, v.82, pp.95-107.
25. Hill, D.F., Younkin*, B.D., 2009, "A simple estimation of the growth rate and equilibrium size of bedforms created by a turbulent wall jet," *Journal of Hydraulic Research*, v.47(5), pp.619-625.
26. Sharp, K.V., Hill, D.F., Troolin, D., Walters*, G., Lai, W., 2009, "Volumetric 3-component velocimetry (V3V) measurements of the turbulent flow in stirred tank reactors," *Experiments in Fluids*, doi 10.1007/s00348-009-0711-9.
27. Younkin*, B., Hill, D., 2009, "Rapid bathymetric surveys of an evolving scour hole using planar laser sheet illumination," *Journal of Hydraulic Engineering*, v.135(10), pp.852-856.
28. Hill, D.F., Vergara*, A., Parra*, E., 2008, "Destratification by mechanical mixers: mixing efficiency and flow scaling," *ASCE Journal of Hydraulic Engineering*, v.134(12), pp.1772-1777.

29. Etherington, L., Hooge, P., Hooge, E., Hill, D., 2007, "Oceanography of Glacier Bay, Alaska: implications for biological patterns and productivity in a glacial fjord estuary," *Estuaries and Coasts*, v.30(6), pp.927-944.
30. Connell, R.J., Kulasiri, D., Lennon*, J., Hill, D.F., 2007, "Computational modeling of turbulent velocity structure for open channel flow using Karhunen-Loeve expansion," *International Journal of Computational Methods*, v.4(3), pp.493-519.
31. Hill, D.F., Younkin*, B.D., 2006, "Measurements of turbulent flow in and around scour holes," *Experiments in Fluids*, v.41, pp.295-307.
32. Lennon*, J.M., Hill, D.F., 2006, "Particle image velocimetry measurements of hydraulic and undular jumps," *ASCE Journal of Hydraulic Engineering*, v.132(12), pp.1283-1294.
33. Hill, D.F., Frandsen, J., 2005, "Transient evolution of weakly-nonlinear sloshing waves: an analytical and numerical comparison," *Journal of Engineering Mathematics*, v.53(2), pp.187-198.
34. Yoon, H.S., Hill, D.F., Balachandar, S., Adrian, R., 2005, "Flow scaling in a Rushton turbine stirred tank, part 1 – mean flow, jet, and tip vortex components," *Chemical Engineering Science*, v.60(12), pp.3169-318.
35. Raju, R., Balachandar, S., Hill, D.F., Adrian, R., 2005, "Flow scaling in a Rushton turbine stirred tank, part 2 – eigen-decomposition of fluctuation," *Chemical Engineering Science*, v.60(12), pp.3185-3198.
36. Hill, D.F., 2004, "Weakly-nonlinear cubic interactions between surface waves and interfacial waves: an analytic solution," *Physics of Fluids*, v.16(3), pp.839-842.
37. Hill, D.F., 2003, "Transient and steady-state amplitudes of forced waves in closed basins," *Physics of Fluids*, v.15(6), pp.1576-1587.
38. Beachler*, M.M., Hill, D.F., 2003, "Stirring up trouble? Resuspension of bottom sediments by recreational watercraft," *Lake and Reservoir Management*, v.19(1), pp.15-25.
39. Hill, D.F., 2002, "General density gradients in general domains: the two-tank method revisited," *Experiments in Fluids*, v.32(4), pp.434-440.
40. Hill, D.F., 2002, "The Faraday resonance of interfacial waves in weakly-viscous fluids," *Physics of Fluids*, v.14(1), pp.158-169.
41. Yoon, H.S., Sharp, K.V., Hill, D.F., Adrian, R.J., Balachandar, S., Ha, M.Y., Kar, K., 2001, "Integrated experimental and computational approach to simulation of flow in a stirred tank," *Chemical Engineering Science*, v.56, pp.6635-6649.
42. Hill, D.F., Sharp, K.V., Adrian, R.J., 2000, "Stereoscopic particle image velocimetry measurements of the flow around a Rushton turbine," *Experiments in Fluids*, v.29(5), pp.478-485.
43. Hill, D.F., Foda, M.A., 1999, "The effects of viscosity and elasticity on the non-linear resonance of internal waves," *Journal of Geophysical Research*, v.104(C5), pp.10,951-10,958.
44. Foda, M.A., Hill, D.F., 1998, "Nonlinear energy transfer from semi-diurnal barotropic motion to near-inertial baroclinic motion," *Journal of Physical Oceanography*, 28, pp.1865-1872.
45. Hill, D.F., Foda, M.A., 1998, "Subharmonic resonance of oblique interfacial waves by a progressive surface wave," *Proceedings of the Royal Society of London*, 454, pp.1-16.

46. Foda, M.A., Hill, D.F., Huang, C.-M., DeNeale, P., 1997, "Fluidization response of sediment bed to rapidly falling water surface," *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 123(5), pp.261-265.
47. Hill, D.F., Foda, M.A., 1996, "Subharmonic resonance of short internal standing waves by progressive surface waves," *Journal of Fluid Mechanics*, 321, pp.217-224.

book publications

- Hijma, M., Engelhart, S., Tornqvist, T., Horton, B., Hu, P., Hill, D. (2015) "A protocol for a geological sea-level database." In I. Shennan, A. Long and B. Horton (Eds.), *Handbook of Sea-Level Research*, Wiley-Blackwell.
- Griffiths, S., Hill, D. (2015), "Tidal Modeling." In I. Shennan, A. Long and B. Horton (Eds.), *Handbook of Sea-Level Research*, Wiley-Blackwell.

conference presentations

- Arendt, A., O'Neel, S., Hill, D.F., 2016, "Advances in cross-disciplinary research and data sharing methods to monitor glacier change," American Geophysical Union Fall Meeting, San Francisco, December.
- Meltzner, A., Switzer, A., Horton, B., Ashe, E., Qui, Q., Hill, D.F., Bradley, S., Kopp, R., Hill, E., Majewski, J., Natawidjaja, D., Suwargadi, W., 2016, "Large Regional Sea-level Oscillations on Human Timescales Revealed by Mid-Holocene Corals," American Geophysical Union Fall Meeting, San Francisco, December.
- O'Neel, S., Sass, L., Koch, J., Littell, J., Klein, E., Marshall, H.P., LeWinter, A., Larsen, C., Hill, D.F., Hood, E., Sawicki, S., Carter, A., "From Icefield to Ocean: Investigating Biophysical Linkages at Wolverine Glacier Alaska," American Geophysical Union Fall Meeting, San Francisco, December.
- Crumley*, R., Hill, D.F., Beamer*, J.P., 2016, "High Resolution Modeling of Historic Glacier and Snowmelt Contributions to Freshwater Runoff into Glacier Bay, Alaska," Northwest Climate Conference, Stevenson, WA, November.
- Hill, D.F., Beamer*, J.P., Arendt, A., Danielson, S., Hedstrom, K., 2016, "Linkages between glaciated coastal mountain watersheds and nearshore waters," International Glaciological Society, San Diego, July.
- *Beamer, J., Hill, D.F., 2016, "Climate Change Impacts on Alaskan Hydrology and Freshwater Discharge," Alaska Marine Science Symposium, Anchorage, AK.
- *Mosier, T., Hill, D.F., Sharp, K.V., 2016, "More robust projections of freshwater fluxes into the Gulf of Alaska under climate change: an intercomparison of coupled hydrologic-cryosphere models," Alaska Marine Science Symposium, Anchorage, AK.
- Hedstrom, K., Danielson, S., Curchitser, Hill, D.F., *Beamer, J., 2016, "High-resolution model integrations for the Gulf of Alaska with realistic freshwater inputs from land," Alaska Marine Science Symposium, Anchorage, AK.

- Meltzner, A., Switzer, A., Horton, B.P., Qui, Q., Hill, E., Hill, D.F., Bradley, S., Majewski, J., Suwargadi, B., Natawidjaja, D., 2015, "A Multi-Peaked Mid-Holocene Relative Sea-Level Highstand on the Sunda Shelf, Indonesia," American Geophysical Fall Meeting, San Francisco, December.
- Beamer*, J., Arendt, A., Luthcke, S., Hill, D.F., Liston, G.E., 2015, "High resolution modeling of the water cycle to refine GRACE signal analysis in the Gulf of Alaska drainage," American Geophysical Union Annual Meeting, San Francisco, December.
- Mosier*, T., Hill, D.F., Sharp, K.V., Arendt, A., 2015, "Climate change impacts on the cryosphere of mountain regions: validation of a novel model using the Alaska Range," American Geophysical Union Annual Meeting, San Francisco, December.
- Khan, N., Ashe, E., Horton, B.P., Brocard, G., Dutton, A., Engelhart, S., Kopp, R.E., Hill, D.F., Peltier, W.R., Scatena, F.N., 2015, "Timing and magnitude of the Caribbean mid-Holocene highstand," American Geophysical Union Annual Meeting, San Francisco, December.
- Cheng*, T., Hill, D.F., Beamer*, J., Garcia-Medina, G., 2015, "Climate change impacts on wave and surge processes in a Pacific Northwest (USA) estuary," Coastal Structures / Solutions to Coastal Disasters Conference, Boston, Massachusetts, September.
- Hedstrom, K., Danielson, S., Curchitser, E., Bitz, C., Hill, D.F., Beamer*, J., 2015, "Fun with ROMS, CICE and Hydrology," Gordon Research Conference - Modeling Coastal Marine Circulation and Physics and the Environmental Processes that They Influence, Biddeford, ME, June.
- Meltzner, A., Switzer, A., Horton, B.P., Suwargadi, B., Natawidjaja, D., Cahill, N., **Hill, D.F.**, Qiu, Q., Hill, E., Majewski, J., Wu, C.-C., Chiang, H.-W., Shen, C.-C., Gong, S.-Y., Peltier, W., Roy, K., 2015, "A double-peaked mid-Holocene relative sea-level highstand on the Sunda Shelf, Indonesia," XIX INQUA Congress, Nagoya, Japan, July/August.
- Mosier*, T., **Hill, D.F.**, Sharp, K.V., 2015, "Comparison of the effects of climate change on future snowfall in high Asia, central Andes, Alps, and Alaska Range through 2100," International Symposium on Glaciology in High-Mountain Asia, Kathmandu, Nepal, March.
- Beamer*, J., **Hill, D.F.**, Arendt, A., Liston, G., 2015, "High-Resolution Modeling of Coastal Freshwater Discharge and Glacier Mass Balance in the Gulf of Alaska Watershed" Alaska Marine Science Symposium, Anchorage, AK, January.
- Parker*, K., Cheng*, T., **Hill, D.F.**, Beamer*, J., Garcia, G., 2014, "The impacts of climate-change on estuarine flooding: a Pacific Northwest case study," American Geophysical Union, San Francisco, CA, December 15-19.
- Beamer*, J., **Hill, D.F.**, Arendt, A., Liston, G., Hood, E., 2014, "High-Resolution Modeling of Freshwater Discharge and Glacier Mass Balance in the Gulf of Alaska Drainage," American Geophysical Union, San Francisco, CA, December 15-19.
- Mosier*, T., **Hill, D.F.**, Sharp, K.V., 2014, "Ensemble predictions of future snowfall scenarios in the Karakorum and Hindu-Kush mountains using downscaled GCM data," American Geophysical Union, San Francisco, CA, December 15-19.

- Sharp, K, Mosier*, T. and **D.F. Hill**, 2014, “Addressing the Current and Future Water Availability Question in the Water=Energy Nexus,” International Conference on Energy Systems and Policies, Islamabad, Pakistan, November 24–26.
- Sharp, K, Mosier*, T. and **D.F. Hill**, 2014, “The Power of Water: The Landscape of Micro-Hydro in Pakistan,” International Conference on Energy Systems and Policies, Islamabad, Pakistan, November 24–26.
- O’Neel, S., Sass, L., Burgess, E., Arendt, A., McGrath, D., Wolken, G., Cassoto, R., **Hill, D.F.**, 2014, “Implications of biophysical linkages in Alaska’s icefield-to-ocean ecosystem,” Climate, Conservation, and Community in Alaska and Northwest Canada Conference, Anchorage, AK, November 4-6.
- Meltzner, A., Switzer, A.D., Horton, B.P., Suwargadi, W.B., Natawidjaja, D.H., Cahill, N., **Hill, D.F.**, Majewski, J., 2014, “Details of the mid-Holocene relative sea-level highstand at Belitung Island, Indonesia, on the Sunda Shelf, from coral microatolls,” Geological Society of America Annual Meeting, Vancouver, BC, Canada, 19-22 October.
- Khan, N., Dutton, A., Horton, B.P., Engelhart, S.E., Kopp, R.E., Peltier, W.R., Brocard, G.Y., **Hill, D.F.**, Scatena, F.N., 2014, “Holocene sea-level database for the Caribbean region,” Geological Society of America Annual Meeting, Vancouver, BC, Canada, 19-22 October.
- Mosier*, T., **Hill, D.F.**, Sharp, K.V., 2014, “Ensemble predictions of snowfall in the Karakorum and Hindu-Kush mountains,” International Summer School in Glaciology, McCarthy, AK, August 6-16.
- Beamer*, J., **Hill, D.F.**, Arendt, A., 2014, “Modeling runoff and glacier mass balance in Prince William Sound, Alaska,” CUAHSI Biennial Science Meeting, Shepherdstown, WV, July 28-30.
- Hijma, M., Engelhart, S., Tornqvist, T., Horton, B.P., Hu, P., **Hill, D.F.**, 2014, “A new protocol for a geological database,” PALSEA 2014, Lochinver, Scotland, September 16-22.
- **Hill, D.F.**, Cheng*, T., Beamer*, J., Garcia, G., 2014, “Climate change impacts on Pacific Northwest estuaries,” Pacific Northwest Climate Conference, Seattle, WA, September 9-10.
- Beamer*, J. **Hill, D.F.**, 2014, “High-resolution modeling of freshwater discharge into the Gulf of Alaska,” Pacific Northwest Climate Conference, Seattle, WA, September 9-10.
- Mosier*, T., **Hill, D.F.**, Sharp, K.V., 2014, “30-Arcsecond climate projections for all global land surfaces,” DailyMeteo 2014 (invited talk), Belgrade, Serbia, June 23-27.
- Mosier*, T., **Hill, D.F.**, Sharp, K.V., 2014, “Development of open-source, freely-available computational tools for the estimation of both current and future water availability and associated micro-hydro power potential in data-scarce regions,” 2014 Tech4Dev International Conference, Lausanne, Switzerland, June 4-6.
- Cheng*, T., **Hill, D.F.**, 2014, “Modeling the hydrodynamic response of Tillamook Bay to climate-change driven boundary conditions,” World Environmental and Water Resources Congress, Portland, OR, June.

- Cheng*, T., Hill, D.F., Beamer, J., 2014, "Modeling the hydrodynamic response of Tillamook Bay to climate-change driven boundary conditions," American Geophysical Union Ocean Sciences Meeting, Honolulu, HI, February.
- Beamer*, J., Hill, D.F., Liston, G., Hood, E., 2014, "Estimates of coastal freshwater discharge from a high-resolution snowmelt runoff model: Prince William Sound, Alaska," World Environmental and Water Resources Congress, Portland, OR, June.
- Hill, D.F., Bruhis*, N., Beamer*, J., 2014, "Freshwater discharge into the Gulf of Alaska – high resolution modeling and practical tools," Alaska Marine Science Symposium, Anchorage, AK, January.
- Black, C., Haller, M.C., Hill, D.F., 2013, "Analysis of waves in the near-field of wave energy converter fields through stereo video," American Geophysical Union Fall Meeting, San Francisco, CA, December.
- Mosier*, T., Hill, D.F., Sharp, K.V., 2013, "High Spatial Resolution Forecasting of Long-Term Monthly Precipitation and Mean Temperature Trends in Data Scarce Regions," American Geophysical Union Fall Meeting, San Francisco, CA, December.
- Mosier*, T., Hill, D.F., Sharp, K.V., 2013, "30 arc-second historical and forecast monthly climate data: a case study for Oregon," 4th Annual Pacific Northwest Climate Science Conference, Portland, Oregon.
- Beamer, J.P*, Hill, D.F., Liston, G.E., Arendt, A.A., Hood, E., 2013, "Estimation of coastal freshwater discharge into Prince William Sound using a high-resolution hydrological model," American Geophysical Union Fall Meeting, San Francisco, CA, December.
- Horton, B.P., Engelhart, S.E., Kemp, A.C., Hill, D.F., Kopp, R.E., 2013, "Holocene relative sea-level changes from the US Atlantic Coast," American Geophysical Union Fall Meeting, San Francisco, CA, December.
- Cheng*, T., Hill, D.F., 2013, "Modeling the hydrodynamic response of Tillamook Bay to climate-change driven boundary conditions," 13th International Conference on Estuarine and Coastal Modeling, San Diego, CA, November.
- Mosier*, T., Hill, D.F., Sharp, K.V., 2013, "Downscaling global climate data: production and optimization of 30 arc-second surfaces," AGU Chapman Conference on Seasonal to Interannual Hydroclimate Forecasts and Water Management, Portland, OR, July.
- Drew, G.S., Hill, D.F., Piatt, J.F., 2013, "Effects of tidal currents on marine bird distribution in Glacier Bay, Alaska," Pacific Seabird Group 40th Annual Conference, Portland, OR, February.
- Bruhis*, N., Hill, D.F., Calos, S.E., 2013, "Freshwater fluxes into the Gulf of Alaska, USA," Alaska Marine Science Symposium, Anchorage, AK, January.
- Hall*, G., Hill, D.F., 2013, "A high-resolution study of tidal range changes in the Delaware Bay: past conditions and future scenarios," Delaware Estuary Science and Environmental Summit, Cape May, NJ, January.
- Beedlow, A.C., Radic, V., Bliss, A.K., Hock, R., Arendt, A.A., Rich, J.L., Hill, D.F., Calos*, S.E., Cogley, J.G., 2012, "Projections of 21st century contribution of Alaska glaciers to rising sea level," American Geophysical Union Fall Meeting, San Francisco, CA, December.

- Mosier*, T., Hill, D.F., Sharp, K.V., 2012, "The need for model simplicity and adaptability: a comparison of degree-index models using measured versus optimized parameters," American Geophysical Union Fall Meeting, San Francisco, CA, December.
- Bruhis*, N., Hill, D.F., 2012, "Freshwater discharge into the Gulf of Alaska," American Geophysical Union Fall Meeting, San Francisco, CA, December.
- Kalmbacher*, K., Hill, D.F., 2012, "Tsunami inundation of the Columbia River estuary resulting from a Cascadia Subduction Zone earthquake," American Geophysical Union Fall Meeting, San Francisco, CA, December.
- Nikitina, D., Horton, B., Kemp, A., Engelhart, S., Hill, D., Hall*, G, 2012, "Holocene evolution of the Delaware Estuary," Geological Society of America Annual Meeting, Charlotte, NC, November.
- Hill, D.F., Hall*, G., Griffiths, S.D., Horton, B.P., Peltier, W.R., "Numerical modeling of tides in the western Atlantic during the Holocene – Regional and Local Results," 4th International Conference on Estuaries and Coasts, Hanoi, Vietnam, October.
- Mosier*, T., Sharp, K.V., Hill, D.F., 2012, "Development of a water runoff model for Pakistan: a tool for identifying and assessing micro-hydro sites," 2012 IEEE Global Humanitarian Technology Conference, Seattle, WA, October.
- Hill, D.F., de Vries, S., de Schipper, M., Stive, M., 2012, "Using remote sensing to measure coastal waves," ASCE / EWRI Hydraulic Measurements and Experimental Methods Conference, Salt Lake City, UT, August
- Hall*, G.F., Hill, D.F., Horton, B.P., Engelhart, S.E., Griffiths, S.D., Peltier, W.R., 2012, "A high-resolution study of tidal range changes in the Delaware Bay: past conditions and future scenarios," American Geophysical Union Ocean Sciences Meeting, Salt Lake City, UT, February.
- Drew, G., Hill, D.F., Piatt, J., 2012, "Effects of tidal currents on marine bird distribution in Glacier Bay, Alaska," 38th Annual Meeting of the Pacific Seabird Group, Haleiwa, HI, February.
- Bruhis*, N., Calos, S.E., Hill, D.F., 2012, "High-resolution monthly precipitation and temperature grids for Alaska, USA: a resource for hydrological studies," Alaska Marine Science Symposium, Anchorage, AK, January.
- Chenoweth, E., Gabriele, C., Hill, D.F., 2012, "Humpback whale habitat selection near tidal headland wakes," Alaska Marine Science Symposium, Anchorage, AK, January.
- Hall*, G.F., Hill, D.F., Horton, B.P., Engelhart, S.E., Griffiths, S.D., Peltier, W.R., 2012, "A high-resolution study of tidal changes in the Delaware Bay," Heceta Head Coastal Conference, Yachats, OR, October.
- Hill, D.F., Calos*, S.E., 2011, "Historical high-resolution weather grids for Alaska and Western Canada: a resource for hydrological studies," Pacific Northwest Glaciologist's Meeting, Portland, OR, October.
- Hill, D.F., de Vries, S., de Schipper, M., Stive, M., 2011, "Stereoscopic imaging of nearshore waves," 10th ARGUS Workshop, Corvallis, OR, July.
- Hill, D.F., 2011, "ADCIRC simulations of tsunami propagation in the Columbia River," Workshop on Tsunami Hydrodynamics in a Large River," Corvallis, OR, August.

- Hill, D.F., Griffiths, S., Pelter, W.R., Horton, B.P., Tornqvist, T.E., 2011, "High-resolution numerical modeling of tides in the western Atlantic, Gulf of Mexico, and Caribbean Sea during the Holocene," American Geophysical Union, San Francisco, CA, December.
- Hijma, M., Tornqvist, T., Hu, P., Gonzalez, J., Hill, D., Horton, B., Engelhart, S., 2011, "A new Holocene sea-level database for the US Gulf Coast: Improving constraints for past and future sea levels," American Geophysical Union, San Francisco, CA, December.
- Tornqvist, T., Horton, B.P., Hijma, M., Engelhart, S., Hu, P., Hill, D.F., Gonzalez, J., 2011, "Towards an open-access Holocene sea-level database for the US Atlantic and Gulf Coasts," Coastal and Estuarine Research Foundation, Daytona Beach, FL, November.
- Hill, D., deVries, S., de Schipper, M., Stive, M., 2011, "Stereo imaging of nearshore waves," European Geophysical Union General Assembly, Vienna, Austria, April.
- Hill, D., Griffiths, S., Peltier, W., Horton, B., Tornqvist, T., 2011, "High resolution numerical modeling of tides in the western Atlantic, Gulf of Mexico, and Caribbean during the Holocene," European Geophysical Union General Assembly, Vienna, Austria, April.
- Haller, M., Lenee-Bluhm, P., Newborn, D., Ozkan-Haller, T., Rhinefrank, K., Hill, D., Honegger, D., Porter, A., 2011, Experiments on the near-field and far-field wave effects of WEC arrays," European Geophysical Union General Assembly, Vienna, Austria, April.
- Calos*, S., Hill, D., 2011, "Estimating precipitation and temperature at high resolution in Alaska," Alaska Marine Science Symposium, Anchorage, AK, January.
- Calos*, S., Hill, D., 2010, "Estimating freshwater fluxes into the Gulf of Alaska," Northwest Glaciologist's Meeting, Fairbanks, AK, October.
- Hill, D., Griffiths, S., Peltier, D., Horton, B., Tornqvist, T., 2010, "High resolution numerical modeling of tides in the western Atlantic, Gulf of Mexico, and Caribbean during the Holocene," ADCIRC Annual Meeting, Vicksburg, MS, April.
- Hill, D., Griffiths, S., Peltier, D., Horton, B., Tornqvist, T., 2010, "High resolution numerical modeling of tides in the western Atlantic, Gulf of Mexico, and Caribbean during the Holocene," AGU Ocean Sciences Meeting, Portland, OR, February.
- Horton, B., Tornqvist, T., Hill, D., Peltier, D., 2010, "Holocene sea-level changes along the Atlantic coast of the United States," Quaternary Research Association, Durham, UK, January.
- Sharp, K.V., Hill, D.F., Walter*, G., 2009, "Volumetric 3-component velocimetry measurements of the flow around a Rushton turbine: a fluid dynamics video," American Physical Society – Division of Fluid Dynamics, Minneapolis, November.
- Chenoweth, E., Gabriele, C., Hill, D., 2009, "Ebb and flow of humpbacks: tidal influences on habitat selection at headlands," 18th Biennial Conference on the Biology of Marine Mammals, Quebec City, Canada, October.
- Klaar, M., Hill, D., Maddock, I., Milner, A., 2009, "The influence of coarse woody debris in the development of habitat complexity within recently deglaciated streams," American Geophysical Union, December, San Francisco, CA.

- de Vries, S., Hill, D., de Schipper, M., Stive, M., 2009, "Using stereo photogrammetry to measure coastal waves," Argus Workshop, University of Plymouth, UK, July 22-24.
- Hill, D., Griffiths, S., Peltier, D., Horton, B., Tornqvist, T., 2009, "High resolution numerical modeling of tides in the western Atlantic, Gulf of Mexico, and Caribbean during the Holocene," Proceedings of the Sixth International Geoscience Programme Project, October, 2009, Conway, South Carolina, USA.
- Horton, B., Engelhart, S., Kemp, A., Tornqvist, T., Gonzales, J., Yu, S., Hu, P., Hill, D., Peltier, D., Shennan, I., Thieler, R., 2009, "Sea-level Changes along the Atlantic Coast of the United States: Implications for Glacial Isostatic Adjustment Models and Current rates of Sea-level Change," Proceedings of the Sixth International Geoscience Programme Project, October, 2009, Conway, South Carolina, USA.
- de Vries, S., Hill, D., de Schipper, M.A., Stive, M.J.F., 2009, "Using stereo photogrammetry to measure coastal waves," Proceedings of the 10th International Coastal Symposium, April, 2009, Lisbon, Portugal.
- Engelhart, S.E., Anderson, C., Hill, D.F., Douglas, B.C., Horton, B.P., Peltier, W.R., van de Plassche, O., Shennan, I., Thieler, E.R., Tornqvist, T.E., 2008, "20th century acceleration in the rate of sea level rise on the US Atlantic Coast: greater than the global average," GSA Annual Meeting, Houston, TX.
- Hill, D.F., Troolin, D., Walters*, G., Lai, W., Sharp, K.V., 2008, "Volumetric three component velocimetry measurements of the turbulent flow in stirred tank reactors," 14th International Symposium on Applications of Laser Techniques to Fluid Mechanics, July 7-10, Lisbon, Portugal.
- Engelhart, S., Anderson, C., Hill, D., Douglas, B.C., Horton, B.P., Peltier, W.R., van de Plassche, O., Shennan, I., Thieler, E.R., Tornqvist, T.E., 2008, "20th century acceleration in the rate of sea-level rise on the US Atlantic coast," AMQUA Meeting, June 5-7, State College, PA.
- Eckert, G., Hill, D., Herter, H., Smith, Q., 2008, "Model and in situ studies of larval dispersal and connectivity in Glacier Bay, Alaska," AGU Ocean Sciences Meeting, March 2-7, Orlando, FL.
- Drew, G., Piatt, J., Hill, D., 2008, "Effects of tidal currents on seabird distribution in Glacier Bay, Alaska," 35th Annual Meeting of the Pacific Seabird Group, February 27 – March 2, Blaine, WA.
- Hill, D.F., Ciavola*, S., Etherington, L., 2008, "Where the wild tides are: modeling the barotropic tide and freshwater runoff in Glacier Bay, Alaska," Alaska Marine Sciences Symposium, January 20-24, Anchorage, AK.
- Vergara*, A., Hill, D.F., 2008, "Destratification by mechanical mixers: mixing efficiency and flow scaling," Penn State College of Engineering Research Symposium, April, University Park, PA.
- Younkin*, B.D., Hill, D.F., 2008, "Prediction of scour formation due to a turbulent wall jet along a non-cohesive sediment bed," Penn State College of Engineering Research Symposium, April, University Park, PA.

- Walters*, G., Hill, D.F., 2008, "An investigation of geometric scaling of mean and turbulent flows in cylindrical stirred tank reactors," Penn State College of Engineering Research Symposium, April, University Park, PA.
- Engelhart, S., Anderson, C., Hill, D., Horton, B., Peltier, W., van de Plassche, O., Shennan, I., Thieler, E., Tornqvist, T., 2007, "Elucidating the Holocene relative sea-level history of the US Atlantic coast," American Geophysical Union Fall Meeting, December 10-14, San Francisco, CA.
- Engelhart, S., Horton, B., Hill, D., Tornqvist, T., Peltier, W., Thieler, E., Anderson, C., van de Plassche, O., Shennan, I., 2007, "Late Holocene relative sea-level change on the eastern seaboard of the USA," Geological Society of America Annual Meeting, October 28-31, Denver, CO.
- Horton, B., Engelhart, S., Hill, D., Tornqvist, T., Peltier, W., Thieler, E., Anderson, C., van de Plassche, O., Shennan, I., 2007, "Sea-level changes along the Atlantic coast of the United States: implications for glacial isostatic adjustment models and current rates of sea-level change," 2007, Geological Society of America Annual Meeting, October 28-31, Denver, CO.
- Hill, D.F., Younkin*, B.D., 2007, "PIV measurements of scour due to planar jets," presented at the ASCE / EWRI Hydraulic Measurements and Experimental Methods conference, September 10-12, Lake Placid, NY.
- Hill, D.F., Younkin*, B.D., 2005, "PIV measurements of turbulent flow in and around scour holes," presented at the 6th International Symposium on Particle Image Velocimetry, September 21-23, Caltech, Pasadena, CA.
- Lennon*, J., Hill, D.F., 2005, "Particle image velocimetry measurements of undular and hydraulic jumps," presented at the ASCE Mechanics and Materials conference, Baton Rouge, LA.
- Younkin*, B., Hill, D.F., 2005, "Scour due to planar turbulent jets," presented at the ASCE Mechanics and Materials conference, Baton Rouge, LA.
- Panel Member, October, 2004, Glacier Bay Symposium, Juneau, AK.
- Hill, D.F., 2004, "To break or not to break; parametrically forced interfacial waves," presented at the American Physical Society Division of Fluid Dynamics Meeting, Seattle, WA, presenter.
- Hill, D.F., 2003, "An analytic solution for the evolution of weakly-nonlinear seiches," presented at the American Physical Society Division of Fluid Dynamics Meeting, Meadowlands, NJ, presenter.
- Hill, D.F., 2003, "Transient and steady-state amplitudes of forced waves in rectangular basins," presented at the ASCE Engineering Mechanics Conference, Seattle, WA, presenter.
- Hill, D.F., Beachler*, M.M., 2002, "ADV measurements of planing boat prop wash," presented at the Hydraulic Measurements & Experimental Methods Conference, Estes Park, CO, presenter.

- Jackson, P.R., Musalem, R., Rehmann, C.R., Hill, D.F., 2002, "Particle image velocimetry errors due to refractive index fluctuations," presented at the Hydraulic Measurements & Experimental Methods Conference, Estes Park, CO.
- Hill, D.F., Beachler*, M.M., 2002, "The impact of boat wakes and prop wash on bottom sediments," invited presentation at the 2002 Wisconsin Lakes Convention, Green Bay, WI, presenter.
- Hill, D.F., 2001, "Forced seiches in closed basins," presented at the American Physical Society Division of Fluid Dynamics Meeting, San Diego, CA, presenter.
- Yoon, H.S., Raju, R., Balachadar, S., Ha, M.Y., Hill, D.F., Adrian, R.J., 2001, "LES/PIV of flow in a stirred tank," presented at the American Physical Society Division of Fluid Dynamics Meeting, San Diego, CA.
- Hill, D.F., Beacher*, M.M., 2001, "The hydrodynamic impacts of recreational watercraft on shallow lakes," invited key session presentation at the North American Lake Management Society Symposium, Madison, WI, presenter.
- Hill, D.F. 2001, "Growth rates and equilibrium amplitudes of seismically forced waves in closed basins," presented at the *ASCE Waves 2001 Symposium*, San Francisco, CA, presenter.
- Hill, D.F., 2001, "Growth rates and equilibrium amplitudes of forced waves in closed basins," presented at *Wave Phenomena III: Waves in Fluids from the Microscopic to the Planetary Scale*, Edmonton, AB, Canada, presenter.
- Invited Presentation, April, 2000, 8th Annual Learning and Teaching with Technology Symposium, The Pennsylvania State University.
- Parra*, E.J., Hill, D.F., 2000, "Turbulent mixing in a stirred stratified flow," presented at the *American Physical Society Division of Fluid Dynamics Meeting*, Washington D.C.
- Hill, D.F., Sharp, K.V., Adrian, R.J., Yoon, H.S., Balachandar, S., 2000, "Integrated experimental and numerical study of the flow around a Rushton turbine," presented at the *American Physical Society Division of Fluid Dynamics Meeting*, Washington D.C, presenter.
- Hill, D.F. 2000, "Making waves in nonlinearly stratified fluids," presented at the *Fifth International Symposium on Stratified Flows*, Vancouver, British Columbia, Canada, presenter.
- Hill, D.F., 2000, "The Faraday resonance of interfacial waves in weakly viscous fluids," presented at the *American Geophysical Union Ocean Sciences Meeting*, San Antonio, TX, presenter.
- Hill, D.F., 1999, "The mixing efficiency of a Rushton turbine in a stirred stratified flow," presented at the *American Physical Society Division of Fluid Dynamics Meeting*, New Orleans, LA, presenter.
- Hill, D.F., Sharp, K. V., Adrian, R.J., 1999, "The implementation of distortion compensated stereoscopic PIV," presented at the *Third International Workshop on Particle Image Velocimetry*, Santa Barbara, CA, presenter.
- Hill, D.F., Sharp, K.V., Adrian, R.J., 1999, "Distortion compensation applied to stereoscopic PIV in a mixing tank," presented at the *Third ASME/JSME Joint Fluids Engineering Conference*, San Francisco, CA, presenter.

- Hill, D.F., Hondzo, M., Haider, Z., 1998, "Boundary mixing due to breaking internal waves," presented at the *American Physical Society Division of Fluid Dynamics Meeting*, Philadelphia, PA, presenter.
- Hill, D.F., Foda, M.A., 1998, "The effects of viscosity and elasticity on the nonlinear resonance of internal waves," presented at the *American Physical Society Division of Fluid Dynamics Meeting*, Philadelphia, PA, presenter.
- Hill, D.F., Foda, M.A., 1998, "Subharmonic resonance of oblique interfacial waves by progressive surface waves," presented at the *Johns Hopkins Conference in Environmental Fluid Mechanics*, Baltimore, MD, presenter.
- Hill, D.F., Foda, M.A., 1997, "Nonlinear energy transfer from semi-diurnal barotropic motion to near-inertial baroclinic motion," presented at the *American Geophysical Union Fall Meeting*, San Francisco, CA, presenter.
- Hill, D.F., Foda, M.A., 1997, "Nonlinear energy transfer from semi-diurnal barotropic motion to near-inertial baroclinic motion," presented at the *American Physical Society Division of Fluid Dynamics Meeting*, San Francisco, CA, presenter.
- Hill, D.F., Foda, M.A., 1996, "The subharmonic resonance of oblique interfacial waves by a progressive surface wave," presented at the *American Geophysical Union Fall Meeting*, San Francisco, CA, presenter.
- Hill, D.F., Foda, M.A., 1996, "The subharmonic resonance of oblique interfacial waves by a progressive surface wave," presented at the *American Physical Society Division of Fluid Dynamics Meeting*, Syracuse, NY, presenter.

invited seminars

- Hill, D.F., 2015. Hatfield Marine Science Center, May 21.
- Hill, D.F., 2015. Oregon State Nearshore Brownbag Seminar, June 4.
- Hill, D.F., 2015. USGS Oregon Water Science Center, Portland, Oregon, May 19.
- Hill, D.F., 2012, "Estimates of coastal freshwater runoff: how to get them and what to do with them," Oregon State University Water Resources Engineering Seminar Series, Corvallis, OR, March.
- Hill, D.F., Calos, S.E., 2011, "Estimates of coastal freshwater runoff: how to get them and what to do with them," United States Geological Survey, Portland, OR, February.
- Hill, D.F., DeVries, S., de Schipper, M., Stive, M., 2009, "Stereoscopic imaging of coastal waves," Massachusetts Institute of Technology.
- Hill, D.F., 2008, "Where the wild tides are: modeling the barotropic tide and freshwater runoff in Glacier Bay, Alaska," NSF IGERT, Louisiana State University, November.
- Hill, D.F., 2008, "Where the wild tides are: modeling the barotropic tide and freshwater runoff in Glacier Bay, Alaska," Oregon State University, College of Oceanic and Atmospheric Sciences, September.

- Hill, D.F., 2008, "Derivation, observation, and computation - activities in the environmental hydraulics research group at Penn State," Oregon State University, Civil and Construction Engineering, September.
- Invited Seminar, April, 2008, Large Lakes Observatory, University of Minnesota at Duluth.
- Invited Seminar, February, 2008, University of Delaware.
- Invited Seminar, October, 2007, University of Puerto Rico / Mayaguez.
- Invited Seminar, June, 2007, University of Alaska Southeast / USGS.
- Invited Seminar, June, 2007, Glacier Bay National Park.
- Hill, D.F. 2006, "From top to bottom of the water column," Imperial College, London, UK, April.
- Graduate Seminar, March, 2005, Civil and Environmental Engineering, The Pennsylvania State University.
- Invited Seminar, March, 2004, Civil Engineering, Johns Hopkins University.
- Graduate Seminar, September, 2003, Mathematics, The Pennsylvania State University.
- Invited Seminar, September, 2003, Civil and Environmental Engineering, University of Illinois.
- Invited Seminar, July, 2003, Civil and Construction Engineering, Oregon State University.
- Invited Seminar, April, 2003, Civil Engineering, University of California Davis.
- Invited Seminar, April, 2003, Civil and Environmental Engineering, Stanford University.
- Invited Seminar, April, 2003, Civil and Environmental Engineering, University of California at Berkeley.
- Graduate Seminar, January, 2003, Civil and Environmental Engineering, The Pennsylvania State University.
- Invited Seminar, November, 2002, Civil and Environmental Engineering, Cornell University.
- Invited Seminar, November, 2002, Civil and Structural Engineering, SUNY Buffalo.
- Invited Seminar, March, 2002, University of Nevada, Reno.
- Invited Seminar, March, 2002, Tahoe Regional Planning Agency.
- Graduate Seminar, January, 2002, Civil and Environmental Engineering, The Pennsylvania State University.
- Graduate Seminar, January, 2001, Civil and Environmental Engineering, The Pennsylvania State University.
- Invited Seminar, May, 2000, Civil and Environmental Engineering, University of California, Berkeley.
- Graduate Seminar, January, 2000, Civil and Environmental Engineering, The Pennsylvania State University.

- Invited Seminar, December, 1999, Meteorology, The Pennsylvania State University.
- Invited Seminar, April, 1999, Civil and Environmental Engineering, The University of Illinois.
- Invited Seminar, April, 1999, Civil and Environmental Engineering, The University of Delaware.
- Invited Seminar, April, 1998, Theoretical and Applied Mechanics, The University of Illinois.

sponsored research

- “Improved methods for recovery of water balance variations of alpine and polar regions using GRACE,” NASA, 9/2015 – 8/2019, \$600,000 (Hill portion \$180,000).
- “Tidal modeling of Indonesia,” Earth Observatory of Singapore, 2/1/2015 – 12/1/2015, \$3000.
- “High-resolution runoff modeling for Glacier Bay National Park: historical changes and present day,” Ocean Alaska Science and Learning Center, 1/2015 – 12/2015, \$40,000 (Hill portion \$40,000).
- “Ice2O: Assessing icefield-to-ocean change in the PCTR,” Alaska Climate Science Center, 1/2015 – 12/2017, \$200,000 (Hill portion \$30,000).
- “Linking hydrological and nearshore oceanographic models in coastal Alaska,” Oil Spill Recovery Institute, 1/2015 – 12/2015, \$100,000 (Hill portion \$50,000).
- “Richardson Highway corridor snow distribution dataset,” Alaska Department of Natural Resources, 1/2015 – 6/2015, \$15,000 (Hill portion \$15,000).
- “USAID Center for Advanced Studies in Energy – Pakistan,” 9/2014 – 8/2019, \$485,000 (Hill portion \$242,500).
- “Tools to model present and projected freshwater fluxes in high-latitude regions and application to Cook Inlet, Alaska,” Oil Spill Recovery Institute, 7/2014 – 6/2016, \$67,000 (Hill portion \$67,000).
- “Preparing for Climate Change in Oregon Estuaries: Flooding Risks, Ecological Impacts, and an Integrated Approach Toward Adaptive Management,” Oregon SeaGrant, 2/1/14 – 1/31/16, \$180,000, PI (Hill portion \$130,000).
- “Development and validation of an updated hydrological model for Prince William Sound, Alaska,” Oil Spill Recovery Institute, 7/1/12 – 6/30/15, \$390,000, PI (Hill portion \$150,000).
- “Multi-purpose river hydraulics research facility,” OSU Research Equipment Reserve Fund, 9/1/11, \$74,950, Co-PI.
- “Catalyzing US-Pakistani collaboration on the current estimation and future prediction of micro-hydro power potential: response to a changing environment,” NSF, 7/1/11 – 8/30/12, \$49,980, Co-PI (Hill portion \$25,000).
- “RDI Streampro acoustic Doppler current profiler,” OSU Research Equipment Reserve Fund, 3/5/10, \$22,490, PI.

- “The contributions of precipitation and glacial processes to freshwater fluxes in the Gulf of Alaska,” North Pacific Research Board, 1/2010 – 12/2013, \$240,000, PI, (Hill portion \$210,000).
- “Collaborative research: sea-level changes along the Atlantic coast of the United States: implications for glacial isostatic adjustment models and current rates of sea-level change,” National Science Foundation, 10/2007 – 9/2010, \$175,000, Co-PI, (Hill portion \$35,000).
- “Implementation of the Caribbean regional integrated coastal ocean observing system,” NOAA, 8/2008 – 9/2011, \$3,300,000, collaborator, (Hill portion \$150,000)².
- “Kayak-based measurements of freshwater discharge into Glacier Bay, Alaska,” Alaska Coastal Marine Resources Grant, 2/2008 – 12/2010, \$10,000, PI³.
- “Environmental hydraulics research,” TU Delft Grants Program, 5/2008 – 9/2009, \$50,000, PI.
- “Integrated numerical and experimental study of scaling effects in stirred tanks,” American Chemical Society – Petroleum Research Fund, 8/2006 – 7/2009, \$80,000, Co-PI, (Hill portion \$40,000).
- “Tidal circulation in Glacier Bay, Alaska: from basic science to practical tools,” National Park Service, 1/2007 – 12/2007, \$10,000, PI.
- “The effects of Reynolds Number, Richardson number, and geometric scale on mixing in stirred tank reactors,” American Chemical Society, Supplement for Under-represented Undergraduate Student Research, 5/2007 – 9/2007, \$5000, PI.
- “Biological impacts of jet-boating on the Chilkat River, Alaska,” Alaska Department of Fish & Game, 5/2003 – 4/2004, \$40,000, PI.
- “Countering terrorists’ use of HVAC cooling towers as delivery systems for biological and chemical agents,” Civilian Research Defense Foundation, 3/2003 – 12/2003, \$100,000, Co-PI, (Hill portion \$11,000).
- “Stereoscopic particle image velocimetry for engineering research and education,” National Science Foundation, Fluid Dynamics and Hydraulics Program, 9/2002 – 8/2003, \$130,000, PI, (Hill Portion \$33,000).
- “The effects of jet boating on salmon and eagle habitat on the Chilkat River, Haines, Alaska,” Alaska Department of Fish and Game, 5/2002 – 5/2003, \$20,000, PI.
- “Resuspension of bottom sediments by recreational watercraft,” United States Department of the Interior, \$42,979, 3/2002 – 12/2002, PI.
- “Hydrodynamic impacts of recreational watercraft,” United States Department of the Interior, 6/2001 – 5/2002, \$36,344, PI.
- “Countering terrorists’ use of HVAC cooling towers as delivery systems for biological and chemical agents,” *Civilian Research Defense Foundation*., 8/2002, \$29,000, Co-PI (Hill Portion \$10,000).

² Project involvement ended after year 1.

³ Project was cancelled after Penn State failed to execute transfer to Oregon State.

graduate student advising

Student	Degree	Thesis	Graduated
1. Ryan Crumley	PhD	<i>TBA</i>	2020 (est.)
2. Elizabeth Holzenthal	PhD	<i>TBA</i>	2020 (est.)
3. Kai Parker	PhD	<i>TBA</i>	2017 (est.)
4. Jordan Beamer	PhD	<i>Development of a hydrological runoff model for Prince William Sound, AK</i>	2016 (est.)
5. Tiffany Cheng	MS	<i>Climate change impacts on nearshore wave climate and estuarine flooding</i>	2014
6. Kirk Kalmbacher	MS	<i>Modeling tsunamis in the Columbia River</i>	2013
7. Thomas Mosier	PhD	<i>Micro-hydro power potential in Pakistan in light of climate change</i>	2015
8. Noa Bruhis	MS	<i>The timing and magnitudes of freshwater fluxes into the Gulf of Alaska</i>	2013
9. Stavros Calos	MS	<i>The timing and magnitudes of freshwater fluxes into the Gulf of Alaska</i>	2010-2011 (incomplete)
10. George Hall	MS	<i>Paleotidal modeling of the Delaware Bay</i>	2012
11. Geoffrey Walters	MS	<i>An investigation of geometric scaling of mean and turbulent flows in cylindrical stirred tank reactors</i>	2008
12. Brian Younkin	PhD	<i>Prediction of scour formation due to a turbulent wall jet along a non-cohesive sediment bed</i>	2008
13. Suzanne Ciavola	Honors BS	<i>Estimating freshwater runoff into Glacier Bay, Alaska</i>	2007
14. Justin Lennon	MS	<i>Application of particle image velocimetry to the hydraulic jump</i>	2004
15. Michele Beachler	MS	<i>The hydrodynamic impacts of recreational watercraft on shallow lakes</i>	2002
16. Eduardo Parra	MS	<i>Mixing in stirred stratified flows</i>	2001

graduate student committees

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- Gabriel Garcia-Medina, PhD
 - Hyoungsu Park, PhD
 - Kevin Buffington, Ph.D.
 - Jon SanFillipo, M.S.

- Marcus Farquhar, MENG, 2015
- Rebecca Kloster, M.S., 2015
- Matt Cooper, MS, 2015
- David Honegger, Ph.D., 2015
- Jason Kiel, M.S., 2015
- Rebecca Aiken, MS, 2014
- Colleen Black, MS, 2014
- Mike Augustyn, MENG, 2014
- Tracie Jackson, PhD, 2014
- Rachelle Valverde, M.S., 2013
- Chris Gifford-Myers, M.S., 2013
- Yongshuai Chen, PhD, 2013
- Kyle Landon, M.OCE., 2012
- Brian Allen, M.Eng., 2012
- Jeffrey Weagel, M.Eng. 2012
- Sarah Kassem, MS 2012
- Natalie Jennings, MENG, 2011
- Yongshuai Chen, MENG, 2011
- Nick Brown, MS, 2010
- Jeremy Mull, MS, 2010
- Alena Beltz, MENG, 2010
- Maria Hermann, PhD 2010
- Frank Klein, PhD (left program)
- Patrick Kerr, PhD (left program)
- Doug Edmonds, PhD, 2009
- Michael Kinzel, PhD, 2008
- Doug Edmonds, MS, 2006
- Florence Brachet, MS, 2004
- Mike Horst, PhD, 2004
- Andrew DeCandis, MS, 2003
- Eric Brown, PhD, 2000
- Marc Tessier, MS, 1999
- Amanda Graham, MS, 1999

graduate council representative

- Jenny Thomas, PhD (Oceanography)
- Jianqing Cui, MS (MIME), 2014
- Ann Morey-Ross, (CEOAS), 201X
- Katy Serafin, MS, Geosciences, 2013
- Piero Mazzini, PhD, Oceanography
- Kevin Drost, MS, (MIME), 2012

classes taught

- Oregon State University
 - ENGR 599 – Engineering in Low Resource Environments
 - CEM 311 – Hydraulics
 - CE 313 – Hydraulic Engineering
 - CE 640 / OC 599 – Matlab for Oceanographers and Engineers
 - CE 419 – Capstone Design
 - CE 544 – Open Channel Hydraulics
 - CE 513 – Applied Nearshore Modeling
 - CE 507 – Graduate Seminar
 - CE 630 – Wave Mechanics I
 - CE 631 – Wave Mechanics II
 - CE 412/512 – Hydrology
 - CE 635 – Applied Nearshore Modeling
- Penn State University
 - CE 580 – Hydrodynamic Mixing Processes
 - CE 552 – Coastal and Nearshore Processes
 - CE 462 – Open Channel Hydraulics
 - CE 362 – Hydraulic Engineering
 - CE 360 – Fluid Mechanics