

## Neil S Banas

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### Education and employment

- 2015 – Senior Lecturer, Dept of Mathematics and Statistics, Univ of Strathclyde
- 2010 – Affiliate Assistant Professor, School of Oceanography, Univ of Washington
- 2012–15 Senior Research Scientist, Joint Institute for the Study of the Atmosphere and Ocean, Univ of Washington
- 2008–12 Oceanographer, Applied Physics Laboratory, Univ of Washington
- 2005–08 Postdoctoral Research Associate, Univ of Washington
- 2005 PhD, Oceanography, Univ of Washington, Seattle, WA, USA
- 2001 MS, Oceanography, Univ of Washington
- 1998 MA, Religious Studies, Univ of Colorado, Boulder, CO, USA
- 1995 BA with Distinction, Physics and Religion, Swarthmore College, Swarthmore, PA, USA

### Publications – Journal articles

- Banas NS, Møller EF, Nielsen TG, Eisner LB. Copepod life strategy and population viability in response to prey timing and temperature: Testing a new model across latitude, time, and the size spectrum. Submitted to *Front. Mar. Sci.*
- Banas NS, Campbell RG (2016) Traits controlling body size in copepods: Separating general constraints from species-specific strategies. *Mar. Ecol. Prog. Ser.*, in press.
- Burke BJ, Anderson JJ, Miller JA, Tomaro L, Teel DJ, Banas NS, Baptista AM (2016) Estimating behavior in a black box: How coastal oceanographic dynamics influence yearling Chinook salmon marine growth and migration behaviors. *Env. Biol. Fish.*, in press.
- Wilson RJ, Heath MR, Banas NS, Speirs DC (2016) Modelling future changes in the diapause capabilities of a North Atlantic Calanoid copepod. *Global Change Biology*, in press.
- Banas NS, Zhang J, Campbell RG, Sambrotto RN, Lomas MW, Sherr E, Sherr B, Ashjian C, Stoecker D, Lessard EJ (2016) Spring plankton dynamics in the Eastern Bering Sea, 1971–2050: Mechanisms of interannual variability diagnosed with a numerical model. *J. Geophys. Res.*, 121:1476-1501, 10.1002/2015JC011449.
- Conway-Cranos L, Kiffney P, Banas N, Plummer M, Naman S, MacCready P, Bucci J, Ruckelshaus M (2015) Stable isotopes and oceanographic modeling reveal spatial and trophic connectivity among terrestrial, estuarine and marine environments. *Mar. Ecol. Prog. Ser.*, 533:15–28.
- Moore SK, Johnstone JA, Banas NS, Salathé EP (2015) Present-day and future climate pathways affecting the harmful algal blooms species *Alexandrium catenella* in Puget Sound, WA, USA. *Harmful Algae* 48:1-15.
- Banas NS, Conway-Cranos L, Sutherland DA, MacCready P, Kiffney P, Plummer M (2015) Patterns of river influence and connectivity among subbasins of Puget Sound, with application to bacterial and nutrient loading. *Estuaries and Coasts*, 38:735-753, doi:10.1007/s12237-014-9853-y.
- Siedlecki SA, Banas NS, Davis KA, Giddings SN, Hickey BM, MacCready P, Connolly TP, Geier S (2015) Seasonal and interannual oxygen variability on the Washington and Oregon continental shelves. *J. Geophys. Res.*, doi:10.1002/2014JC010254.
- Davis KA, Banas NS, Giddings SN, Siedlecki S, MacCready P, Hickey BM, Lessard EJ, Kudela RM (2015) Estuary-enhanced upwelling of marine nutrients fuels coastal productivity in the U.S. Pacific Northwest. *J. Geophys. Res.*, doi:10.1002/2014JC010248.

- Otero Tranchero P, Banas NS, Ruiz-Villareal M (2014) A surface ocean trajectories visualization tool and its initial application to the Galician coast. *Envir Modelling and Software*, 66:12–16.
- Giddings SN, MacCready P, Hickey BM, Banas NS, Davis KA, Siedlecki SA, Trainer VL, Kudela RM, Pelland N, Connolly TP (2014) Hindcasts of potential harmful algal bloom transport pathways on the Pacific Northwest coast. *J. Geophys. Res.*, 119:2439-2461.
- Banas NS (2011) Adding complex trophic interactions to a size-spectral plankton model: Emergent diversity patterns and limits on predictability. *Ecol. Modelling* 222:2663–2675.
- Sutherland DA, MacCready P, Banas NS, Smedstad LF (2011) A numerical modeling study of what controls the salt content and total exchange flow in the Salish Sea. *J. Phys. Oceanogr.*, 41:1125-1143, doi:10.1175/2011JPO4540.
- Kudela RM, Horner-Devine AR, Banas NS, Hickey BM, Peterson TD, McCabe RM, Lessard EJ, Frame E, Bruland KW, Jay DA, Peterson JO, Peterson WT, Kosro PM, Palacios SL, Lohan MC, Dever EP (2010) Multiple trophic levels fueled by recirculation in the Columbia River plume. *Geophys. Res. Lett.*, 37, L18607, doi:10.1029/2010GL044342.
- Hickey BM and 20 co-authors (2010) River Influences on Shelf Ecosystems: Introduction and Synthesis. *J. Geophys. Res.*, 115, C00B17, doi:10.1029/2009JC005452.
- Banas NS, MacDonald PS, Armstrong DA (2009). Green crab larval retention in Willapa Bay, Washington: An intensive Lagrangian modeling approach. *Estuaries and Coasts*, 32:893-905.
- Banas NS, Lessard E, Kudela R, MacCready P, Peterson T, Hickey BM, Frame E (2009). Planktonic growth and grazing in the Columbia River plume region: A biophysical model study. *J. Geophys. Res.*, 114, C00B06, doi:10.1029/2008JC004993.
- Liu Y, MacCready P, Hickey BM, Dever EP, Kosro PM, Banas NS (2009). Comprehensive evaluation of a coastal ocean circulation model for the Columbia River plume using observations in summer 2004. *J. Geophys. Res.*, 114, C00B04, doi:10.1029/2008JC004929.
- Banas NS, MacCready P, Hickey BM (2009) The Columbia River plume as along-shelf barrier and cross-shelf exporter: A Lagrangian model study. *Cont. Shelf Res.*, 29:292-301.
- MacCready P, Banas NS, Hickey BM, Dever E (2009) A model study of tide-and wind-induced mixing in the Columbia River estuary and plume. *Cont. Shelf Res.*, 29:278-291.
- Hickey BM, Banas NS (2008) Why is the northern end of the California Current System so productive? *Oceanography*, 21:90-107.
- Kudela RM, Banas NS, Barth JA, Frame EF, Jay D, Largier JL, Lessard EJ, Peterson TD, Vander Woude AJ (2008) New insights into the controls and mechanisms of plankton productivity in coastal upwelling waters of the northern California Current System. *Oceanography*, 21:40-53.
- Banas NS, Hickey BM, Newton JA, Ruesink J (2007) Tidal exchange, bivalve grazing, and patterns of primary production in Willapa Bay, Washington, USA. *Mar. Ecol. Prog. Ser.*, 341:123-139.
- Banas NS, Hickey BM (2005) Mapping exchange and residence time in Willapa Bay, Washington, a branching, macrotidal estuary. *J. Geophys. Res.*, 110(C11), 10.1029/2005JC002950.
- Banas NS, Hickey BM, MacCready P, Newton JA (2004) Dynamics of Willapa Bay, Washington, a highly unsteady, partially mixed estuary. *J. Phys. Oceanogr.*, 34, 2413-2427.
- (See also “Papers of Note: Questioning assumptions about estuary balance,” *Bull. Amer. Met. Soc.*, Jan 2005)
- Banas NS, Wang D-P, Yen J (2004) Experimental validation of an individual-based model for zooplankton swarming. *Handbook of Scaling Methods in Aquatic Ecology: Measurement, Analysis, Simulation* (L Seuront and PG Strutton, eds.), CRC Press.
- Hickey, BM, Banas NS (2003) Oceanography of the U.S. Pacific Northwest coast and estuaries with application to coastal ecology. *Estuaries*, 26, 1010-1031.

Hickey, BM, X Zhang, Banas N (2002) Coupling between the California Current System and a coastal plain estuary in low riverflow conditions. *J. Geophys. Res.* 107(C10), 1029/1999JC000160.

### **Other publications**

Banas NS, Cheng W (2015) An oceanographic circulation model for South Puget Sound. Shellfish aquaculture in Washington State: Final report to the Washington State Legislature (Washington SeaGrant, 84 pp: <https://wsg.washington.edu/shellfish-aquaculture>), chapter 4.

MacCready P, Banas NS (2012) Residual circulation, mixing, and dispersion. *Treatise on Estuarine and Coastal Science* (E Wolanski and DS McLusky, eds., Elsevier), chapter 2.5.

Devol A, Newton JA, Bassin C, Banas NS, Kawase M, Ruef W, Bahng B, Warner M (2011) Determining nitrogen loads to Hood Canal and effect on oxygen. Hood Canal Dissolved Oxygen Program Integrated Assessment and Modeling Report (<http://www.hoodcanal.washington.edu/>), chapter 3.4.

### **Conference presentations (first-author only; \* = invited)**

- Banas NS, Møller EF, Nielsen TG, Eisner LB (2016) Linking climate change to community-level impacts on copepods via a new, trait-based model: Life-history and metabolic mechanisms compared. ICES Zooplankton Symposium, Bergen, Norway.
- Banas NS (2016) Traits controlling body size in copepods: Separating general constraints from species-specific strategies. Poster, ICES Zooplankton Symposium, Bergen, Norway.
- Banas NS (2015) Timing, not temperature: Disentangling pathways from climate change to phytoplankton, microzooplankton, and copepods in recent models of the Bering Sea and Disko Bay, Greenland. MASTS Annual Science Meeting, Glasgow UK.
- \* Banas NS (2015) Insights into ecosystem model parameterization from a new hindcast/projection of spring plankton dynamics in the Bering Sea. MEOPAR/MEAP-TT Workshop on Operational Ocean Modeling, Halifax, Canada (**invited**)
- Banas NS (2015) Timing, not temperature: Disentangling pathways from climate change to phytoplankton, microzooplankton, and copepods in recent models of the Bering Sea and Disko Bay, Greenland. Ecosystem Studies of Subarctic Seas, Seattle WA.
- Banas NS (2014) Future climate impacts on Puget Sound oceanography: the North Pacific and hydrological context. Salish Sea Ecosystem Conference, Seattle WA.
- Banas NS, Campbell R, Zhang J (2014) Linking climate to Bering Sea fisheries recruitment via a new, trait-based copepod life-history model. Ocean Sciences, Honolulu, HI.
- Banas NS, Campbell R, Zhang J, Ashjian C, Pinchuk A, Lessard E, Sherr E, Sherr B (2014) Temperature and ice influences on large zooplankton on interannual and multidecadal scales: ecosystem and life-history modeling approaches. Bering Sea Open Science Meeting, Honolulu, HI.
- Banas NS, Campbell R, Zhang J, Ashjian C, Pinchuk A, Lessard E, Sherr E, Sherr B (2013) Large zooplankton and their predators in a warming Bering Sea: ecosystem and life history modeling approaches. PICES, Nanaimo, BC, Canada.
- Banas NS, Campbell R, Zhang J, Ashjian C, Pinchuk A, Lessard E, Sherr E, Sherr B (2013) Large zooplankton and their predators in a warming Bering Sea: ecosystem and life history modeling approaches. International Workshop on Trait-based Approaches to Ocean Life, Charlottenlund, Denmark.
- Banas NS, Salathé EP, Johnstone JA, Moore SK (2013) Pathways of future climate influence on the U.S. Pacific Northwest coast and estuaries, with application to *Alexandrium* harmful algal blooms. Gordon Res Conf on Coastal Ocean Circulation, Biddeford MN.
- Banas NS, Campbell R, Zhang J, Ashjian C, Pinchuk A, Lessard E, Sherr E, Sherr B (2012) Linking sea-ice retreat and increasing water temperature to plankton community structure and function in the eastern Bering Sea. Gordon Res Conf on Polar Sciences, Ventura, CA.
- Banas NS, Campbell R, Zhang J, Ashjian C, Pinchuk A, Lessard E, Sherr E, Sherr B (2012) Linking sea-ice retreat and increasing water temperature to plankton community structure and function in the eastern Bering Sea. Bjerknes Center Conference on Climate Change in High Latitudes, Bergen, Norway.
- Banas NS (2012) Trophic complexity, limits on predictability, and emergent ecosystem structure and function in a new size-spectral ecosystem model. AGU/ASLO Ocean Sciences Meeting, Salt Lake City, UT.

- Banas NS, Moore SK, Greengrove CL, Salathé EP, Stein JE, Bill BD, Trainer VL, Anderson DM, Mantua NJ, Masura JE (2011) Ocean, atmosphere, and watershed impacts on *A. catenella* in Puget Sound: Climate-timescale modeling and interannual observations. Salish Sea Ecosystem Conference, Vancouver, BC.
- \* Banas NS, Hickey BM, Salathé EP, MacCready P (2011) Freshwater influences on productivity in the northern California Current System, present and future: Or, rivers as buffers against climate change in upwelling zones. PICES, Khabarovsk, Russia **(invited)**
- Banas NS (2011) Adding rich trophic interactions to a size-spectral plankton model: Emergent diversity patterns and limits on predictability. Advances in Marine Ecosystem Modeling Research, Plymouth, UK.
- Banas NS (2011) Limits on predictability in a size-spectral plankton model: A strategy for ensemble forecasting of diverse ecosystems. Ecosystem Studies of Subarctic Seas, Seattle WA.
- \* Banas NS (2010) Freshwater influences on productivity, retention, and export in the northern California Current System. AGU Fall Meeting, San Francisco CA **(invited)**
- Banas NS (2010) Limits on predictability in a diversity-resolving plankton model: A strategy for ensemble ecosystem forecasting. PICES, Portland, OR.
- Banas NS (2010) Tidal dispersion in sinuous channels. Physics of Estuaries and Coastal Seas, Mt. Lavinia, Sri Lanka.
- Banas NS (2010) Adding rich trophic interactions to a size-spectral plankton model: diversity patterns and predictability. ASLO, Santa Fe, NM.
- Banas NS (2009) Controls on primary production in a new, mid-complexity model of Hood Canal. Coastal and Estuarine Res Fed (CERF), Portland, OR.
- \* Banas NS (2009) Growth, grazing, retention, and dispersion in a complex river plume. Gordon Research Conference on Coastal Oceanography, New London, NH **(invited)**
- Banas NS, Lessard EJ, Kudela RM, MacCready P (2009) Planktonic growth and grazing in the Columbia River plume region: A biophysical model study. ASLO, Nice, France.
- Banas NS, Lessard EJ, Kudela RM, MacCready P (2008) The Columbia River plume in the U.S. Pacific Northwest upwelling system: cross-shelf dispersion and export of primary production. Physics of Estuaries and Coastal Seas, Liverpool, England.
- Banas NS, Lessard EJ, Kudela RM, MacCready P (2008) Modeling planktonic growth and grazing in the Columbia River plume region. AGU/ASLO Ocean Sciences, Orlando, FL.
- Banas NS, MacDonald PS, Armstrong DA (2007) Green crab larval retention in Willapa Bay, Wash.: An intensive Lagrangian modeling approach. Eastern Pacific Oceanography Congress, Leavenworth, WA.
- \* Banas NS (2007) Designing ecosystem models to tell biological stories. Gordon Research Conference on Coastal Ocean Modeling, New London, NH **(invited)**
- Banas NS and MacCready P (2006) The Columbia River plume as mixer, barrier, and conduit. Eastern Pacific Ocean Conference (EPOC), Mt Hood, OR.
- Banas NS, MacCready P (2006) Upwelling, nutrient entrainment, and primary production in and out of the Columbia River plume. Physics of Estuaries and Coastal Seas, Astoria, OR.
- Banas NS, MacCready P (2006) Modeling nutrient cycling and primary production dynamics in and out of the Columbia River Plume. Poster, AGU/ASLO Ocean Sciences, Honolulu, HI.
- Banas NS, Hickey BM, Newton J, Ruesink J (2005) Tidal stirring, bivalve grazing, and patterns of primary and secondary production in Willapa Bay, WA. Estuarine Res Fed, Norfolk, VA.
- Banas NS, Hickey BM (2004) Observations and modeling of tidal exchange mechanisms in Willapa Bay, WA, USA. Physics of Estuaries and Coastal Seas, Mérida, Mexico.
- Banas NS, Hickey BM (2004) Tidal mixing rates and residence times from data and modeling in Willapa Bay, WA. Poster, Pacific Northwest Estuarine Res Soc, Port Townsend, WA.
- Banas NS, Hickey BM (2003) Diagnosing non-gravitational exchange in steady and unsteady estuaries. Estuarine Res Fed, Seattle, WA.
- Banas NS, Hickey BM (2003) Comparing lateral tidal dispersion with density-driven exchange in a highly unsteady, partially mixed estuary. Phys of Estuaries and Coastal Seas, Hamburg, Germany.
- Banas NS (2002) Priests, tricksters, and holy wanderers in the practice of natural history. Pacific Northwest Amer Acad of Religion, Eugene, OR.
- Banas NS, Hickey BM (2002) Seasonally varying controls on flushing and ocean-estuary exchange in Willapa Bay, WA. Poster, AGU Ocean Sciences, Honolulu, HI.
- Banas NS and Hickey BM (2001) Seasonally varying physical controls on flushing and oceanic nutrient/ phytoplankton supply in Willapa Bay, WA. Poster, Estuarine Res Fed, St Pete Beach, FL.

- Banas NS, Hickey BM, Newton JA (2000) Intrusions of the Columbia River plume and spring growth conditions in Willapa Bay, WA. Eastern Pacific Oceanography Congress, Patricia Bay, BC.
- Banas NS, Hickey BM, Newton JA (2000) Lateral advection and upstream propagation of physical and biological signals in Willapa Bay, Wash. Pacific Estuarine Res Soc, Sidney, BC.
- Banas NS, Hickey BM (2000) Moored observations of ocean-estuary coupling on the Washington and Oregon coasts. Pacific Northwest Oceanographic Res Mtg, Corvallis, OR.
- Banas NS, Hickey BM, Newton JA, Siegel E (2000) Physical and biological water properties of banks and channels in Willapa Bay, WA. AGU/ASLO Ocean Sciences, San Antonio, TX.
- Banas NS, Wang D-P, Okubo A, Yen J (1998) Verification of a mathematical model for zooplankton swarming. Poster, AGU/ASLO Ocean Sciences, San Diego, CA.

### Other invited seminars

- 2016 Institute of Biodiversity, Animal Health, and Comparative Medicine, Univ of Glasgow
- 2015 Scottish Oceans Institute, Univ of St Andrews  
UK-Norwegian Arctic Workshop, Scottish Association of Marine Science, Oban, UK
- 2014 Univ of Washington Program on the Comparative History of Ideas  
“Unstable exchanges: Dynamics of marine food webs and the work of the Haida mythteller Skaay”  
National Institute of Aquatic Resources, Danish Technical Univ, Charlottenlund, Denmark  
Graduate School of Oceanography, Univ of Rhode Island
- 2013 Workshop on Modeling in Support of Management of Coastal Hypoxia and Acidification in the California Current Ecosystem (Center for Ocean Solutions / California Ocean Science Trust)
- 2012 Dept of Oceanography, Texas A&M
- 2011 Oceanography Dept, Dalhousie Univ, Halifax, Canada  
Institut Universitaire Européen de la Mer, Brest, France  
Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Germany
- 2007 Civil & Environmental Engineering, UC Berkeley  
Ocean Sciences Dept, UC Santa Cruz  
Young Investigators series, School of Aquatic and Fishery Sciences, University of Washington
- 2006 Oregon State Univ, Corvallis, OR
- 2005 NOAA Southwest Fisheries Science Center, Pacific Grove, CA  
Ocean Sciences Dept, UC Santa Cruz  
Virginia Institute of Marine Science, Gloucester Pt, VA

### Classroom teaching — Strathclyde

- 2016 MM116 (Mathematics 1C)

### Classroom teaching — Univ of Washington (as primary instructor only)

- 2013 “Climate Change Impacts on Marine Ecosystems,” UW Aquatic and Fishery Sciences
- 2004–13 “Northwest Coastal Stories: Turbulence in Science and Culture,” UW Comparative History of Ideas, Oceanography, and Honors Program  
*Course announcement:* “This course will follow Jonathan Raban's remarkable travelogue *Passage to Juneau* on a tour through the human and natural history of the Pacific Northwest coastal waters. We'll discuss chaos theory and the circulation of Puget Sound; coastal ecology and climate change; the art and mythology of the Northwest tribes and the problems of ethnography; the Vancouver expedition and the Romantic Sublime. The unifying theme is the interplay between order and chaos, and how we cope (in science, in literary criticism, in political decision-making) with the limits of rationality and the limits of our knowledge. How do we, and how did the indigenous cultures on this coast, deal with natural unpredictability and all the dangers that result—from navigating a turbulent channel to managing a salmon fishery? This course will be driven strongly by student discussion and writing.”
- 2011 “Writing Animals,” UW Honors Program (co-taught with Sarah Read, English)  
*Course announcement:* “This course will explore how writers in a variety of genres from scientific articles to children's books address the question of what connects us to and divides us from other animals, and the moral and psychological implications of our answers. We will read popular and technical science writing, fieldwork memoirs, food journalism, eco-philosophy, fiction, mythology, and art criticism, with

particular attention to the uses and limitations of science in all these contexts. Students will choose one of the genres above as the focus of their writing and research for the quarter. We will also consider what it means to be writing animals, animals who write, ourselves: can we view academic discussion and the activity of writing as particular kinds of embodied, social primate behavior? Species considered in the course will include gorillas, ravens, whales, bears (grizzly, teddy), ants, professors, and goats.”

2008 “World Religions and the Environment,” UW Honors Program

*Course announcement:* “This course will explore intersections between religious belief and practice and the natural world, on both grand and intimate scales. Grand like the all-encompassing vision of interconnectedness in Mahayana Buddhism, or the message of glory and salvation John Muir brought down from the Sierra mountains, or the quiet ferocity of the lords of the undersea world in Haida mythology. Intimate like the ethical dilemma posed by mosquitoes in a zen center in the woods, the poet Gary Snyder’s reflections on Grace before meals, or the message of “creation care” spreading among contemporary evangelical congregations. We will discuss the debate over whether the biblical tradition is the root cause of our environmental crisis, the solution to the crisis, or both; how religious belief shapes current environmental activism in Seattle, Thailand, and beyond; and parallels between religious thought and the ‘deep ecology’ of naturalists like Aldo Leopold. The course will be driven by student discussion, writing, and close reading of compelling primary texts.”

2001–07 “Humans and Other Animals,” UW Honors Program, Comparative History of Ideas

*Course announcement:* “The last few hundred years of Western history have forced non-human animals off much of their traditional range, both environmentally and psychologically. Animals now inhabit only the margins of our communities, our daily awareness, and our understanding of our own identity. This dispossession continues in spite of all we know from biology about the animal roots of human nature and the ecological ties that bind us. What would a rediscovery of these ties look like? Does the path lie through politics and an expanded social contract—for example, animal rights and vegetarianism—or through the flesh, as in the bloody intimacy of the family farm? This class will navigate a path through both the sciences and the humanities: through criticism (Paul Shepard, Mary Midgley, Jean Baudrillard), first-hand reports by naturalists and scientists (Barry Lopez with a pod of beached whales; Penny Patterson with Koko the gorilla), and fiction (John Berger, J. M. Coetzee). Students will be encouraged to experiment across these genres in their own writing, and to refine their efforts, workshop-style, through conversation and peer review. We will also go on a field trip to the Woodland Park Zoo, to study both the animals inside the cages and the ones looking in.”

**Supervision and mentoring** (\* = first supervisor or equivalent)

*Postgraduate students*

2016–	* Thai Hoa Nguyen, PhD, Strathclyde M&S	(1st supervisor)
2016–	* Soizic Garnier, PhD, Strathclyde M&S	(1st supervisor)
2016	Alessandro Sabatino, PhD, Strathclyde M&S	(internal examiner)
2015–	* Trevor Slougher, PhD, Strathclyde M&S	(1st supervisor)
2013–	* Hally Stone, MS/PhD, UW Oceanography	(primary advisor)
2014	Julie Sainmont, Danish Technical Univ	(external examiner)
2013–15	Jeff Rutter, PhD, UW Aquatic and Fish Sci	(committee member)
2011–14	Liz Tobin, PhD, UW Oceanography	(committee member)
2010–14	Dan Nowacki, PhD, UW Oceanography	(committee member)
2012	Tom Connolly, PhD, UW Oceanography	(reading committee)
2012	Greg Kowalke, PhD, UW Oceanography	(committee member)
2010	Elizabeth Wheat, PhD, UW Biology	(committee member)
2010	Katie Boldt, MS, UW Oceanography	(committee member)

*Postdocs*

2016–	* Dr Laura Hobbs, Strathclyde M&S	(primary supervisor)
2016–	* Dr Sofia Ferreira, UW / Strathclyde	(primary supervisor)
2013	Dr Sarah Giddings	(co-advisor)
2011–12	Dr Samantha Siedlecki	(co-advisor)
2010–12	* Dr Kristen Davis	(primary advisor)

*Faculty teaching mentorships* (UW Huckabay Teaching Fellowship program)

- 2010 Erin Ellis, PhD student in Oceanography;  
project: “Biogeochemical Cycles and Ecosystem Functioning,” a new 400-level course
- 2008 Eleanor Williams, PhD student in Oceanography;  
project: “Communicating with figures: A new upper-level seminar for earth scientists”
- Undergraduate independent studies* (UW Comp Hist of Ideas)
- 2010 “Human relationships with wildlife” (student: Chelsea Keene)
- 2004 “Chaos theory, evolution, and the social sciences” (Gabriel Fahoum)
- 2003 “Animals in captivity: theory and practice” (Miciah Jacobs)
- 2001 “American nature writing” (Kevin Nielsen)

### Fellowships and awards

- 2015 Chancellor’s Fellowship, Univ of Strathclyde (5 yrs)
- 2010 Early career travel grant, PICES Annual Meeting
- 2003 Sea Grant Award, Mtg of the Estuarine Research Federation
- 2001 Huckabay Teaching Fellowship, Univ of Washington Graduate School
- 2000 Best Graduate Student Presentation, Mtg of the Pacific Estuarine Research Society
- 1999–2002 National Defense Science and Engineering Graduate Fellowship (3 yrs support)
- 1997 Melville Summer Research Fellowship, Marine Sciences Res Ctr, SUNY Stony Brook
- 1995–97 Chancellor's Fellowship, Univ of Colorado Graduate School (2 yrs support)

### Art, design, and photography

- 2012 Solo exhibition: “Rain and Flow,” Blindfold Gallery, Seattle, May 10–June 9
- 2009 Collaborator on science-based sound installation/performance: Carrie Bodle, “Sewing Sonifications,” Westlake Park, Seattle, Aug 10
- Image credits:
- Mark Garcia, “Prologue for a History, Theory and Future of Patterns of Architecture and Spatial Design,” *Architectural Design* 79:6-17
- “The Tiles of Infinity,” *Saudi Aramco World*, Sept/Oct 2009
- Haida Gwaii: The Queen Charlotte Islands* (Heritage)
- 2008 Group exhibition: “Maxalot: Processing Light,” Today'sArt Festival, The Hague, Sep 26-27
- Two works featured in *Patterns 2: Design, Art, and Architecture* (Glasner, Schmidt, and Schöndeling, eds., Birkhäuser Basel): *Rain* (2007) and *Rosette 80* (2007)

### Article and proposal review

- Agency panels: NOAA ECOHAB program  
Minnesota SeaGrant
- Proposal reviews: US NSF (Physical, Biological, Chemical Oceanography, Polar Sciences)  
NOAA MERHAB program  
US EPA  
Maine SeaGrant  
Minnesota SeaGrant  
Oregon SeaGrant  
California SeaGrant  
Univ of Louisiana  
Qatar National Research Fund
- Journal articles: Biology  
*Global Change Biol.*  
*Am. Nat.*  
*Ecol. Modelling*  
*Can. J. Aquat. Fish. Sci.*
- Oceanography  
*J. Geophys. Res.*  
*J. Physical Oceanogr.*  
*Deep-Sea Res.*  
*Prog. Oceanogr.*
- Other  
*Nature Sci. Rep.*  
*Mar. Pollution Bull.*  
*J. Hydrol.*  
*Envir. Model. Software*

*Fish. Oceanogr.*  
*J. Plankt. Res.*

*Geophys. Res. Lett.*  
*Ocean Dyn.*  
*Est. Coastal Shelf Sci.*  
*Cont. Shelf. Res.*  
*Est. Coasts*

**Other activities**

- 2015– \* GlobalHAB Scientific Steering Committee (Scientific Committee of Oceanic Research (SCOR) / UNESCO Intergovernmental Oceanographic Commission)
- 2015– Academic lead for Strathclyde, Scottish Aquaculture Innovation Centre
- 2015 Contributor, “State of Knowledge: Climate Change in Puget Sound,” Univ of Washington Climate Impacts Group
- 2015– End-user forum, Arctic ABC (Applied Technology, Biological Interactions, and Consequences) program (Univ of Tromsø)
- 2014 \* Steering committee, Second International Workshop on Trait-Based Approaches to Ocean Life
- 2013 \* Steering committee, Gordon Research Conference on Coastal Ocean Circulation
- 2012–15 Steering committee, Puget Sound Environmental Monitoring and Assessment Program Modeling Workgroup
- 2012 Science team, Earth System Prediction Capability (ESPC) demonstration program on Coastal Harmful Algal Blooms and Hypoxia
- 2011, 14 Session chair, Salish Sea Ecosystem Conference
- 2008 Panelist, Univ of Washington Science Studies Network (“Scientist’s Perspectives: What can Science and Technology Studies do for science?”)
- 2007–11 Univ of Washington Huckabay Graduate Teaching Fellowship selection committee
- 2007 \* Conference chair, Eastern Pacific Oceanographic Congress (EPOC)
- 2005–07 UW Honors Program Faculty Council
- 2003 Senior Facilitator, Annual TA Conference on Teaching and Learning, UW Center for Instructional Development and Research
- 2002 Univ of Washington Physical Oceanography graduate curriculum committee
- 2001 Panelist, Univ of Washington Program on the Comparative History of Ideas (“Cross-disciplinary work in the humanities, sciences, and the arts”)
- 2001 Organizer, Student Physical Oceanography Retreat (StuPOR), Friday Harbor, WA (Six-institution student research conference)
- 2000 Organizer, The All-Student Oceanography Educational Retreat (tOASter), Friday Harbor, WA (UW-wide, interdisciplinary student research conference)