

Heidi L. Fuchs

Department of Marine and Coastal Sciences
Rutgers, The State University of New Jersey
71 Dudley Road
New Brunswick, NJ 08901

Phone: (848) 932-3252
E-mail: hfuchs@marine.rutgers.edu
Web: <http://marine.rutgers.edu/~hfuchs>
Updated August 1, 2019

EDUCATION

- 2005 PhD, MIT & Woods Hole Oceanographic Institution, Biological Oceanography
Thesis: “Biophysical coupling between turbulence, veliger behavior, and larval supply”
- 1999 BS, University of Wyoming, Zoology
- 1990 BS, University of Wisconsin - Madison, Art

APPOINTMENTS

- 2016–present Associate Professor, Rutgers Department of Marine and Coastal Sciences
- 2008–2016 Assistant Professor, Rutgers Department of Marine and Coastal Sciences
(2008–2014 in Institute of Marine and Coastal Sciences)
- 2007–2010 Guest Investigator, Woods Hole Oceanographic Institution
- 2005–2008 Postdoctoral Scholar, Scripps Institution of Oceanography, UC–San Diego
- 1999–2005 Graduate Research Fellow, Woods Hole Oceanographic Institution

SCHOLARSHIP

PUBLICATIONS

*Undergraduate and **graduate student co-authors

In progress **H.L. Fuchs**, R.J. Chant, E.J. Hunter, E.N. Curchitser, G.P. Gerbi, and E.Y. Chen*. Changing phenology and larval transport drive benthic species’ wrong-way migrations. *Submitted*.

B. Knowles, J. Bonachela, M. Behrenfeld, K.G. Bondoc, B.B. Cael, C. Carlson, N. Cieslik, B. Diaz, **H. Fuchs**, J. Graff, J. Grasis, K. Halsey, L. Haramaty, C.T. Johns, F. Natale, J.I. Nissimov, B. Schieler, K. Thamatrakoln, T.F. Thingstad, S. Våge, C. Watkins, T. Westberry, and K.D. Bidle. Temperate infection in a canonically virulent host-virus system. *Submitted*.

2018 **H.L. Fuchs**, G.P. Gerbi, E.J. Hunter, and A.J. Christman. 2018. Waves cue distinct behaviors and differentiate transport of congeneric snail larvae from sheltered versus wavy habitats. *Proceedings of the National Academy of Sciences*, 115: E7532-E7540.

Highlighted in Rutgers Today, NSF’s Science360, Phys.org, Science Daily, Hakai Magazine.

- H.L. Fuchs** and J.A. Specht**. 2018. Evidence for diverse responses to viscosity in suspension-feeding bivalves: Reply to Riisgård and Larsen (2018). *Marine Ecology Progress Series* 596: 267-270.
- J.A. Specht** and **H.L. Fuchs**. 2018. Thermal and viscous effects of temperature on *Mercenaria mercenaria* filtration. *Marine Ecology Progress Series* 589: 129-140.
- 2017 **H.L. Fuchs**, J.A. Specht**, D.K. Adams, and A.J. Christman. 2017. Turbulence induces metabolically costly behaviors and inhibits food capture in oyster larvae, causing net energy loss. *Journal of Experimental Biology* 220: 3419-3431 (Editor's Choice).
Highlighted in Inside JEB.
- 2016 **H.L. Fuchs** and G.P. Gerbi. 2016. Seascape-level variation in turbulence- and wave-generated hydrodynamic signals experienced by plankton. *Progress in Oceanography* 141: 109:129.
- 2015 **H.L. Fuchs**, A.J. Christman, E.J. Hunter, G.P. Gerbi, and F.J. Diez. 2015. Directional flow sensing by passively stable larvae. *Journal of Experimental Biology* 218: 2782-2792.
- H.L. Fuchs**, G.P. Gerbi, E.J. Hunter, A.J. Christman, and F.J. Diez. 2015. Hydrodynamic sensing and behavior by oyster larvae in turbulence and waves. *Journal of Experimental Biology* 218: 1419-1432.
- 2014 K.P. Crum**, **H.L. Fuchs**, P.A.X. Bologna, and J.J. Gaynor. 2014. Model-to-data comparisons reveal influence of jellyfish interactions on plankton community dynamics. *Marine Ecology Progress Series* 517: 105-119.
- 2013 **H.L. Fuchs** and M.A. Reidenbach. 2013. Biophysical constraints on optimal patch lengths for settlement of a reef-building bivalve. *PLoS ONE*, 8(8): e71506.
- H.L. Fuchs**, E.J. Hunter, E.L. Schmitt*, and R.A. Guazzo*. 2013. Active downward propulsion by oyster larvae in turbulence. *Journal of Experimental Biology*, 216: 1458-1469.
- 2011 **H.L. Fuchs** and C. DiBacco. 2011. Mussel larval responses to turbulence are unaltered by larval age or light conditions. *Limnology & Oceanography: Fluids & Environments* 1: 120-134.
- C. DiBacco, **H.L. Fuchs**, J. Pineda, and K. Helfrich. 2011. Swimming behavior and velocities of barnacle cyprids in a downwelling flume. *Marine Ecology Progress Series* 433: 131-148.
- 2010 **H.L. Fuchs**, A.R. Solow, and L.S. Mullineaux. 2010. Larval responses to turbulence and temperature in a tidal inlet: Habitat selection by dispersing gastropods? *Journal of Marine Research* 68: 153-188.
- H.L. Fuchs** and P.J.S. Franks. 2010. Plankton community properties determined by nutrients and size-selective feeding. *Marine Ecology Progress Series* 413: 1-15 (Feature Article).

- 2007 **H.L. Fuchs**, M.G. Neubert, and L.S. Mullineaux. 2007. Effects of turbulence-mediated larval behavior on larval supply and settlement in tidal currents. *Limnology & Oceanography* 52: 1156-1165.
- 2004 **H.L. Fuchs**, L.S. Mullineaux, and A.R. Solow. 2004. Sinking behavior of gastropod larvae (*Ilyanassa obsoleta*) in turbulence. *Limnology & Oceanography* 49: 1937-1948.
- 2004 F.J. Tapia, J.Pineda, F.J. Ocampo-Torres, **H.L. Fuchs**, E. Parnell, P. Montero, and S. Ramos. 2004. High-frequency observations of wind-forced onshore transport at a coastal site in Baja California. *Continental Shelf Research* 24: 1573-1585.

GRANTS

Grants at Rutgers University

2018–2021	NSF, “Collaborative Research: Linking behavior and transport of larvae using waves and turbulence as cues,” H.L. Fuchs (PI), G.P. Gerbi, and R.J. Chant	\$691,029 (\$565,343 to Rutgers)
2016–2017	Rutgers Research Council Grant, “Turbulence effects on energetics of oyster larvae,” H.L. Fuchs	\$2,000
2012–2013	Rutgers Faculty Research Grant, “Acidification effects on larval density and sinking velocity,” H.L. Fuchs	\$22,307
2011–2015 (ext. 2016)	NSF, “Relative influence of turbulence and waves on larval behavior,” H.L. Fuchs (PI), G.P. Gerbi, and F.J. Diez	\$645,439
2011–2014	NJDEP, “Multi-trophic level modeling of Barnegat Bay,” O.P. Jensen (PI) and H.L. Fuchs	\$249,740
2009–2011	NSF, “RAPID: Role of ephemeral bottom roughness patches in unpredictable recruitment of surfclams on the continental shelf,” C. Fuller (PI), P. Ramey, J. Grassle, G. Taghon, and H.L. Fuchs	\$99,989

Grants at Other Institutions

2008–2010	WHOI Coastal Ocean Institute, “Simultaneous measurement of larval behavior and turbulence in the laboratory,” L.S. Mullineaux, K.R. Helfrich, and H.L. Fuchs	\$62,782
2007–2010	Woods Hole Sea Grant, “Characterization of the behavior of mussel larvae in turbulence and downwelling flow,” H.L. Fuchs , C. DiBacco, and L.S. Mullineaux	\$23,967
2006–2008	WHOI Coastal Ocean Institute, “Construction of a double-grid turbulence tank for larval behavior studies,” L.S. Mullineaux and H.L. Fuchs	\$35,762

2003–2005	WHOI Coastal Ocean Institute, “Temporal variation in larval supply relative to turbulence in a tidal inlet,” H.L. Fuchs and L.S. Mullineaux	\$44,354
2005	American Society of Limnology and Oceanography travel award	\$250
2003–2004	Woods Hole Sea Grant New Initiative grant	\$2,500
2003	Rinehart Coastal Research Center grant	\$2,000
2000–2004	MIT & WHOI, 8 research and travel awards	\$4,485

FELLOWSHIPS AND AWARDS

1999–2002	National Science Foundation Graduate Research Fellowship
1999	Summer Research Fellowship, Woods Hole Oceanographic Institution
1998	Summer Student Fellowship, Woods Hole Oceanographic Institution
1998	Phi Kappa Phi Honor Society, University of Wyoming chapter
1997–1998	Mr. and Mrs. Harold DeWitt Scholarship (2 awards), University of Wyoming
1990	Golden Key National Honor Society, University of Wisconsin chapter
1989	Edith L. Gilbertson Scholarship, Art Department, University of Wisconsin
1986	Kemper K. Knapp Merit Scholarship, University of Wisconsin

PRESENTATIONS

Invited Talks and Seminars

2019	Waves and turbulence as navigational signals for dispersing larvae. OIMB seminar. Oregon Institute of Marine Biology, Charleston, OR
2018	Waves and turbulence as navigational signals for dispersing larvae. School of Earth, Ocean and Environment seminar. University of South Carolina, Columbia, SC
2015	Sensing mechanisms and ecological consequences of flow-induced larval behavior. Ecology seminar. Scripps Institution of Oceanography, University of California, San Diego, CA
2015	Sensing mechanisms and ecological consequences of flow-induced larval behavior. Marine Sciences seminar. University of Connecticut, Avery Point, CT
2014	Hydrodynamic sensing and behavior by larvae in turbulence and waves. Mechanical Engineering seminar. University of Nevada, Reno, NV
2013	A multiscale look at larval behavior and settlement on oyster reefs. Oceans and Atmosphere Colloquium. Stony Brook University, Stony Brook, NY
2013	Hydromechanical sensing and behavior by larvae in turbulence and waves. Batsheva de Rothschild Seminar on Marine Life in Flow. Inter-University Institute for Marine Sciences, Eilat, Israel
2008	Responses of snail larvae to turbulence in a tidal inlet, and implications for dispersal. Joint Physical/Biological Oceanography seminar. Oregon State University, Corvallis, OR
2006	Larval responses to turbulence and temperature in a tidal inlet. 7th Larval Biology Symposium. Coos Bay, OR

Departmental Seminars

- 2019 Waves and turbulence as navigational signals for dispersing larvae. Marine and Coastal Sciences Seminar. Rutgers, New Brunswick, NJ
- 2009 Plankton community properties determined by nutrients and size-selective feeding. Ecology and Evolution seminar. Rutgers, New Brunswick, NJ
- 2006 Biophysical coupling between turbulence, veliger behavior, and larval supply. Ecology seminar. Scripps Institution of Oceanography, La Jolla, CA
- 2004 Sinking behavior of gastropod larvae (*Ilyanassa obsoleta*) in grid-stirred turbulence. Biology seminar. Woods Hole Oceanographic Institution, Woods Hole, MA

Contributed Conference Talks

- 2018 **H.L. Fuchs**, J.A. Specht, D.K. Adams, and A.J. Christman. Turbulence induces metabolically costly behaviors and inhibits food capture in oyster larvae, causing net energy loss. Ocean Sciences, Portland, OR
- 2017 J. Specht** and **H.L. Fuchs**. Effects of seawater temperature on hard clam (*Mercenaria mercenaria*) energetics. ASLO Aquatic Sciences Meeting, Honolulu, HI
- 2014 **H.L. Fuchs**, G.P. Gerbi, E.J. Hunter, A.J. Christman, and F.J. Diez. Hydromechanical sensing and behavior by larvae in turbulence and waves. Ocean Sciences, Honolulu, HI
- 2013 **H.L. Fuchs** and M.A. Reidenbach. Behavioral and physical controls on optimal patch lengths for larval settlement on oyster reefs. Coastal and Estuarine Research Federation, San Diego, CA
- 2012 **H.L. Fuchs** and M.A. Reidenbach. Turbulence-induced sinking and substrate type impact settlement patterns of oyster larvae. Ocean Sciences, Salt Lake City, UT
- 2011 **H.L. Fuchs**. Emerging patterns of thresholds in plankton responses to turbulence. Aspen Ocean Symposium, Aspen, CO
- 2011 C. DiBacco, **H. Fuchs**, J. Pineda, and K. Helfrich. Assessing swimming behavior and velocities of barnacle larvae in a downwelling flume. 5th International Zooplankton Production Symposium, Pucón, Chile
- 2010 **H.L. Fuchs** and J.A. Lerczak. Species-specific larval responses to turbulence affect retention time in a tidal inlet. 9th International Larval Biology Symposium, Wellington, New Zealand
- 2010 **H.L. Fuchs** and P.J.S. Franks. Defining effects of zooplankton assemblage on plankton community properties. Ocean Sciences, Portland, OR
- 2008 **H.L. Fuchs**. How do changes in zooplankton community affect plankton size structure? Workshop on Size-Structured Models, Woods Hole, MA
- 2007 **H.L. Fuchs**, M.G. Neubert, and L.S. Mullineaux. Effects of turbulence-mediated larval behavior on larval supply and settlement in tidal currents. American Society of Limnology and Oceanography, Santa Fe, NM

- 2007 C. DiBacco, J. Pineda, **H.L. Fuchs**, and K. Helfrich. Development and application of a downwelling flume to assess vertical swimming velocities and behaviors of meroplankton. American Society of Limnology and Oceanography, Santa Fe, NM
- 2005 **H.L. Fuchs**, L.S. Mullineaux, M.G. Neubert, and A.R. Solow. Larval responses to turbulence: estimates from larval distributions in a tidal channel. American Society of Limnology and Oceanography, Santiago de Compostela, Spain
- 2004 **H.L. Fuchs**, L.S. Mullineaux, and A.R. Solow. Sinking behavior of gastropod larvae (*Ilyanassa obsoleta*) in grid-stirred turbulence. Ocean Sciences, Honolulu, HI

Posters

- 2019 **H.L. Fuchs**, G.P. Gerbi, E.J. Hunter, A.J. Christman, and R.J. Chant. Waves and turbulence as navigational signals for dispersing larvae. Microscale Ocean Biophysics, Whistler, B.C., Canada.
- 2018 J.G. Low* and **H.L. Fuchs**. Larval energetics is kind of dense: Applying Stokes' law to estimate density of oddly shaped larvae with unknown Stokes diameters. Florida Association of Aquatic Biologists Meeting, St. Augustine, FL.
- 2016 J. Specht** and **H. Fuchs**. Effects of seawater temperature and viscosity on hard clam (*Mercenaria mercenaria*) suspension feeding. Society for Women in Marine Science Fall Symposium, Woods Hole, MA
- 2016 J. Specht** and **H. Fuchs**. Effects of seawater temperature and viscosity on hard clam (*Mercenaria mercenaria*) suspension feeding. Benthic Ecology Meeting, Portland, ME
- 2016 **H.L. Fuchs** and G.P. Gerbi. Conspecific snail larvae from turbulent inlets and the wavy continental shelf use different physical behavioral cues. Ocean Sciences, New Orleans, LA
- 2016 G.P. Gerbi and **H.L. Fuchs**. Effects of behavioral responses on vertical distributions of snail larvae (*Ilyanassa obsoleta* and *trivittata*). Ocean Sciences, New Orleans, LA
- 2015 G.P. Gerbi and **H.L. Fuchs**. Particle vertical distributions determined by behavioral responses to waves and turbulence. Gordon Research Conference on Coastal Ocean Modeling, Biddeford, ME
- 2015 **H.L. Fuchs**, G.P. Gerbi, E.J. Hunter, A.J. Christman, and F.J. Diez. Directional flow sensing by passively stable larvae. Microscale Ocean Biophysics, Aspen, CO
- 2013 **H.L. Fuchs**, E.J. Hunter, A.J. Christman, G.P. Gerbi, and F.J. Diez. Active downward propulsion by oyster larvae in turbulence and waves. Microscale Interactions in Aquatic Environments, Les Houches, France
- 2011 C.M. Fuller, R.F. Petrecca, P.A. Ramey, G.L. Taghon, J.P. Grassle, and **H.L. Fuchs**. Role of bottom roughness in recruitment and survival of surfclams, *Spisula solidissima*, on the New Jersey continental shelf. American Society of Limnology and Oceanography, San Juan, Puerto Rico
- 2007 **H.L. Fuchs** and P. Franks. Size-selective feeding drives plankton community structure. Ecological Society of America Meeting, San Jose, CA
- 2007 **H.L. Fuchs** and P. Franks. Size-selective feeding drives plankton community structure. NSF site review for CCE LTER, Scripps Institution of Oceanography, San Diego, CA

- 2006 **H.L. Fuchs** and P. Franks. A new continuum model for planktonic ecosystems. LTER All Scientists Meeting, Estes Park, CO
- 2002 **H.L. Fuchs**, L.S. Mullineaux, and S.P. McKenna. Sinking behavior of gastropod veligers in response to oscillating grid-generated turbulence. American Society of Limnology and Oceanography, Victoria, BC, Canada
- 2000 **H.L. Fuchs**. A qualitative study of planktonic benthic invertebrate larvae in Vineyard Sound (MA). 4th International Larval Biology Meeting, Santa Cruz, CA

WORKSHOP PARTICIPATION

- 2013 OASIS Leadership & Professional Development Program, Rutgers University
- 2008 Size-Structured Modeling Workshop, Woods Hole Oceanographic Institution
- 2000–2002 WHOI Mathematical Ecology Retreats, Nantucket, MA

CRUISES

- 2013–2014 Principal Investigator, 2 1-day trawling cruises, New Jersey coast, RV Arabella.
- 2002–2004 Principal Investigator, 17 1-day cruises, Massachusetts coast, RV's Tioga, Mytilus, Calanus. Biological and physical measurements for thesis research.
- 2000–2001 Research Assistant, 2 cruises, Chile to Antarctica, ARSV L. M. Gould.
- 1999 Research Assistant, 10 1-day cruises, Ensenada, Mexico to Bahia Salsipuedes.
- 1999 Sea Education Association Cruise, 10-day sail, Woods Hole, SSV Corwith Cramer.

TEACHING

Undergraduate Courses

- 2019 Fall 11:628:320 Dynamics of Marine Ecosystems (4), co-instructor
Spring 11:628:410 Biophysical Interactions: From Barnacles to Jellyfish (3)
Spring 11:628:130 Sea Monsters and Weird Biology in World's Oceans (2 lectures)
Spring 11:628:498 Independent study (2)
- 2018 Fall 11:628:320 Dynamics of Marine Ecosystems (4), co-instructor
Spring 11:628:410 Biophysical Interactions: From Barnacles to Jellyfish (3)
Spring 11:628:498 Independent study (2)
- 2017 Fall 11:628:320 Dynamics of Marine Ecosystems (4), co-instructor
Fall 11:628:497 Independent study (1,2)
Spring 11:628:410 Biophysical Interactions: From Barnacles to Jellyfish (3)
- 2016 Fall 11:628:320 Dynamics of Marine Ecosystems (4), co-instructor
Fall 11:628:497 Independent study (2)
Spring 11:628:410 Biophysical Interactions: From Barnacles to Jellyfish (3)
- 2015 Fall 11:628:320 Dynamics of Marine Ecosystems (4), co-instructor
Spring 11:628:410 Biophysical Interactions: From Barnacles to Jellyfish (3)
Spring 11:628:498 Independent study (3)
- 2014 Fall 11:628:320 Dynamics of Marine Ecosystems (4), co-instructor
Spring *On sabbatical leave*

- 2013 Fall 11:628:320 Dynamics of Marine Ecosystems (4), co-instructor
Spring 11:628:410 Biophysical Interactions: From Barnacles to Jellyfish (3)
- 2012 Fall 11:628:320 Dynamics of Marine Ecosystems (4), co-instructor
Spring 11:628:410 Biophysical Interactions: From Barnacles to Jellyfish (3)
- 2011 Fall 11:628:320 Dynamics of Marine Ecosystems (4), co-instructor
Spring 11:628:497 Independent study (3)
Spring 11:554:398 Honors tutorial (3)
- 2010 Fall 11:628:320 Dynamics of Marine Ecosystems (4), co-instructor
- 2009 Fall 11:628:320 Dynamics of Marine Ecosystems (4), co-instructor
- 2009 Summer 11:628:497 Independent study (3)
Spring 11:628:462 Ocean Ecology (4), 2 guest lectures

Graduate Courses

- 2016 Spring 16:712:606 Oceanography Seminar (1), resource faculty member
- 2011 Spring 16:712:606 Oceanography Seminar (1), resource faculty member
- 2010 Spring 16:712:606 Oceanography Seminar (1), resource faculty member
Spring 16:712:604 Numerical Modeling of Coupled Systems (3), co-instructor
- 2009 Spring 16:712:606 Oceanography Seminar (1), resource faculty member

Curriculum Development

- 2019 Spring Assisted in development of Sea Monsters and Weird Biology in World's Oceans (11:628:130) for undergraduate students
- 2012 Spring Developed new course on Biophysical Interactions (11:628:410) for undergraduate and graduate students
- 2010 Spring Revised biological component of Numerical Modeling of Coupled Systems (16:712:604) for Graduate Program in Oceanography students
- 2009 Fall Revised biological component of Dynamics of Marine Ecosystems (11:628:320), required for undergraduate Marine Sciences majors and minors

ADVISING AND MENTORING

Postdocs

- 2018–present Karen Grace Bondoc, EOAS postdoctoral fellow
- 2017–2018 Corie Charpentier, EOAS postdoctoral fellow

Graduate Students – Primary Advisor

- M.S. 2017 Jaclyn Specht, Graduate Program in Oceanography, Rutgers
Thesis: “Effects of temperature on hard clam (*Mercenaria mercenaria*) feeding and energetics.”
- M.S. 2014 Kevin Crum, Graduate Program in Oceanography, Rutgers
Thesis: “Modeling plankton in a human-impacted estuary: Copepod- vs. jellyfish-dominated communities.”

Graduate Students – Committee Member

- Ph.D. current Christopher Johns, Graduate Program in Oceanography, Rutgers
Ph.D. current Joseph Caracappa, Graduate Program in Oceanography, Rutgers
Ph.D. 2015 Jim Vasslides (Qualifying exam committee), Ecology and Evolution, Rutgers
M.S. 2011 Laura Palamara, Graduate Program in Oceanography, Rutgers

Undergraduate Research, Rutgers University

- 2019 Anthony Renner, independent study (11:628:498), “Estimating density of porous particles”
2018 Jonathan Low, NSF REU/Research Internship in Ocean Sciences, “Applying Stokes’ law to estimate density of oddly shaped larvae with unknown Stokes diameters”
2018 Danielle Barnes, NSF REU/Research Internship in Ocean Sciences, “Behavioral response of a larval crab to artificial light” (co-mentor)
2018 Emily Chen, independent study (11:628:498), “Larval sea urchin volume estimates”
2017 Emily Chen, independent study (11:628:497), “Range shifts in the Middle Atlantic Bight”
2017 Roger Krol, independent study (11:628:497), “Diffusion coefficients in the ocean”
2016 Carly Faltraco, independent study (11:628:497), “Cilia density on hard clam gills”
2015 Molly Moroz, NSF REU/Research Internship in Ocean Sciences, “Turbulence and food availability effects on mud snail larval swimming”
2015 Lauren Huey, independent study (11:628:498), “Orientation of urchin larvae in rotating flow”
2014 Lauren Huey, undergraduate volunteer, trained in image data processing
2014 Rachel Gonsenhausner, NSF REU/Research Internship in Ocean Sciences, “Effects of turbulence and food on respiration by sea urchin larvae”
2012 Connor Walsh, recent graduate, trained in particle image velocimetry and data analysis
2012 Mia Iwane, NSF REU/Research Internship in Ocean Sciences, “Effects of acidification on the density of larval mud snails (*Ilyanassa obsoleta*)”
2012 Emily Pirl, recent graduate, trained in larval culturing and video-micrography
2011 Drew Webster, recent graduate, trained in invertebrate larval IDs and video-micrography
2011 Jason Sadowski, honors tutorial (11:554:398), “Modeling invasions of planktonic predators in a size-structured ecosystem”
2011 Regina Guazzo, independent study (11:628:498), “The effects of algae on oyster larvae swimming behavior”
2010 Erika Schmitt, NSF REU/Research Internship in Ocean Sciences, “*Crassostrea virginica* larval interactions with synthetic and algal particles”, RIOS poster award 2nd place
2009 Katherine Douglas, independent study (11:628:497, 11:628:498), “The responses of young and old *Mytilus edulis* larvae to light and turbulence”
2009 Charlene Smith, work study, trained in sorting plankton samples

Undergraduate Academic

- 2016–2017 Reviewer for Christina McCosker, George H. Cook Honors Thesis, “Spatial distribution of larvae around an eddy along the Florida Straits”
2011–2012 Reviewer for Jason Sadowski, George H. Cook Honors Thesis, “Systematic review of the influence of propagule pressure on exotic species establishment success”
2009–present Academic advisor for Marine Sciences majors (2–3 per year)

Undergraduate Research, Other Institutions

- 2004 Michael Workman, guest student, Woods Hole Oceanographic Institution
- 2004 Lynne Davies, guest student, Woods Hole Oceanographic Institution
- 2002 Yuri Yamashita, guest student, Woods Hole Oceanographic Institution

SERVICE

Research Community

- 2018 Session co-organizer, “Biological-physical processes in nearshore and shallow-coastal environments,” TOS/ASLO/AGU Ocean Sciences meeting, Portland, OR
- 2018 Presentation evaluator, TOS/ASLO/AGU Ocean Sciences meeting, Portland, OR
- 2017 NSF panel service, Integrative Organismal Systems
- 2014 Session co-organizer, “Consequences of fluid stirring and mixing: from organisms to ecosystems,” TOS/ASLO/AGU Ocean Sciences meeting, Honolulu, HI
- 2014 Presentation judge, TOS/ASLO/AGU Ocean Sciences meeting, Honolulu, HI
- 2013 Session co-organizer, “Estuarine Shallows, Part 1: Biophysical interactions,” Coastal and Estuarine Research Federation, San Diego, CA
- 2012 Poster judge, TOS/ASLO/AGU Ocean Sciences meeting, Salt Lake City, UT
- 2011 NSF site visit team member, Center for Coastal Margin Observation & Prediction, Oregon Health & Science University, Beaverton, OR
- 2011 Session co-organizer, “The Diverse Role of Meroplankton in the Biology and Ecology of Marine Systems,” 5th International Zooplankton Production Symposium, Pucón, Chile

Professional Memberships:

- 2013 Coastal and Estuarine Research Federation
- 2010 The Oceanography Society
- 2009 Ecological Society of America
- 2004–2013 American Geophysical Union
- 2004–present Association for the Sciences of Limnology and Oceanography

Proposal Reviews:

National Science Foundation:

Biological Oceanography

Major Research Instrumentation

Organism-Environment Interactions

Historically Black Colleges and Universities - Undergraduate Program

National Oceanic and Atmospheric Administration:

Delaware Sea Grant

Oregon Sea Grant

US Army Research Office

DFG–German Research Foundation

Book Reviews:

Oxford University Press (proposal review, 2015; chapter review, 2016)
Prentice Hall (textbook co-review, 2002)

Manuscript Reviews:

<i>Animal Behaviour</i>	<i>Journal of Marine Systems</i>
<i>Aquatic Biology</i>	<i>Journal of Plankton Research</i>
<i>Biology Letters</i>	<i>Journal of the Royal Society Interface</i>
<i>Continental Shelf Research</i>	<i>Journal of Theoretical Biology</i>
<i>Coral Reefs</i>	<i>Limnology & Oceanography</i>
<i>Deep-Sea Research II</i>	<i>L&O: Fluids & Environments</i>
<i>Ecological Applications</i>	<i>Marine Biology</i>
<i>Ecology</i>	<i>Marine Ecology Progress Series</i>
<i>Environmental Fluid Mechanics</i>	<i>Oecologia</i>
<i>Estuaries & Coasts</i>	<i>PLoS ONE</i>
<i>Global Ecology & Biogeography</i>	<i>Proceedings of the National Academy of Sciences</i>
<i>Integrative & Comparative Biology</i>	<i>Proceedings of the Royal Society B</i>
<i>Journal of Experimental Biology</i>	<i>Progress in Oceanography</i>
<i>Journal of Exp. Marine Biology & Ecology</i>	<i>Royal Society Open Science</i>
<i>Journal of Geophysical Research: Oceans</i>	

Rutgers University

2018–present Member of Biological, Biomedical & Health Sciences Academic Cluster Committee for the School of Graduate Studies (representing Ecology & Evolution)
2012–2018 Member of Oceanography Scholastic Review Committee
2011 Member of two subcommittees on position descriptions for IMCS faculty hires
2009–2018 Member of Oceanography Graduate Admissions Committee
2009 Presented research overview to IMCS Advisory Board
2009 Interviewee for Rutgers Women’s Leadership course
2009–present Member of Ecology and Evolution Graduate Program
2008–present Member of the Graduate Program of Oceanography

Department of Marine and Coastal Sciences

2019 Chair of Marine and Coastal Sciences Undergraduate Award Committee
2018 Chair of Marine and Coastal Sciences Undergraduate Award Committee
2015 Member of Outstanding Senior in Marine and Coastal Sciences Award Committee
2013 Poster Judge for NSF REU/Research Internship in Ocean Sciences
2011 Panelist for round-table discussion with graduate students and NSF REU interns
2009 Member of Outstanding Senior in Marine and Coastal Sciences Award Committee
2009 Poster Judge for NSF REU/Research Internship in Ocean Sciences

Service, Other Institutions

2003-2005 Founder and co-organizer of weekly Redfield Movie series, Woods Hole, MA
2002 Co-organizer of WHOI turbulence reading and discussion group, Woods Hole, MA
2001 Science fair judge for Falmouth Academy, Falmouth, MA