

CURRICULUM VITAE

KARA LAVENDER LAW

Research Professor of Oceanography

Sea Education Association

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EDUCATION:

Ph.D. Physical Oceanography, University of California, San Diego/Scripps Institution of Oceanography, La Jolla, CA, 2001.

B.S. Mathematics (Magna Cum Laude), Duke University, Durham, NC, 1994.

Semester in residence, Duke University Marine Laboratory, Beaufort, NC, 1993.

Graduate Advisors: Professors Russ E. Davis and Lynne D. Talley, Scripps Institution of Oceanography.

Post-Graduate Advisor: Dr. W. Brechner Owens, Woods Hole Oceanographic Institution.

PROFESSIONAL EXPERIENCE:

- Research Professor of Oceanography, Sea Education Association, Woods Hole, MA, 2012-present.
- Research Oceanographer, Sea Education Association, Woods Hole, MA, 2010-2012.
- Visiting Researcher, State University of New York at Geneseo, Dept. of Physics and Astronomy, Geneseo, NY, 2011-2012.
- Adjunct Professor, State University of New York at Geneseo, Dept. of Physics and Astronomy, Geneseo, NY, Fall 2010.
- Oceanography Faculty/Chief Scientist, Sea Education Association, Woods Hole, MA, 2003-2009.
- Visiting Investigator, Woods Hole Oceanographic Institution, Physical Oceanography Dept., Woods Hole, MA, 2003-2005.
- Postdoctoral Scholar, Woods Hole Oceanographic Institution, Physical Oceanography Dept., Woods Hole, MA, 2001-2003.
- Postdoctoral Teaching Fellow, Woods Hole Oceanographic Institution, Physical Oceanography Dept., Woods Hole, MA, 2002.
- Graduate Student Researcher, Scripps Institution of Oceanography, Physical Oceanography Dept., La Jolla, CA, 1995-2001.
- Teaching Assistant, Scripps Institution of Oceanography, Physical Oceanography Dept., La Jolla, CA, 1997.
- Research Technician, North Carolina State University, Marine, Earth and Atmospheric Sciences Dept., Raleigh, NC, 1994-1995.
- Summer Student Fellow, Woods Hole Oceanographic Institution, Physical Oceanography Dept., Woods Hole, MA, 1994.

RESEARCH INTERESTS:

- Plastic marine pollution
- Ocean circulation
- Deep-water convection

RESEARCH AWARDS:

- National Science Foundation, CBET: “Collaborative research: The role of sunlight in determining the fate and microbial impact of microplastics in surface waters”, \$87,700. Co-principal investigator (with A. Stubbins), 2019-2022.
- 11th Hour Racing: “*Marine Debris Tracker Community Expansion and Partnership with Seabin and Sea Education Association (SEA)*”, \$50,000. Co-principal investigator (with J. Jambeck, K. Johnsen), 2018-2019.
- NOAA Marine Debris Program: “*Towards Creating a Social Norm: A Student-Designed Program to Reduce Marine Debris through Behavior Change*”, \$96,050. Principal investigator (with E. Bryant, M. Long, D. Kinkade, J. Holdren), 2016-2018.

- NOAA Marine Debris Program: “*Investigating Selective Grazing by Copepods of Virgin and Weathered Microplastics Contaminated with PBT Substances*”, \$117,751, Co-principal investigator (with A. Siuda, A. Andrady), 2013-2014.
- National Science Foundation, Chemical Oceanography: “*Physical and Chemical Degradation of Plastics in the Marine Environment*”, \$575,135, Principal investigator (with A. Andrady, G. Proskurowski), 2013-2016.
- NOAA Marine Debris Program: “*The effect of wind-driven mixing on observations of plastic marine debris: modeling, verification and reanalysis*”, \$61,521, Co-principal investigator (with G. Proskurowski, T. Kukulka), 2012-2013.
- National Fish and Wildlife Foundation and NOAA Marine Debris Program: “*Measuring plastic debris in the North Atlantic Ocean*”, \$152,000, Principal investigator (with G. Proskurowski), 2010-2011.
- National Science Foundation, SGER Collaborative Research Grant: “*Exploring a long-term record of plastic pollution in the North Atlantic*”, \$33,000, Co-principal investigator (with C. Reddy), 2008-2010.
- National Fish and Wildlife Foundation and NOAA Marine Debris Program: “*North Pacific plastic debris and seabird research cruise*”, \$40,000, Co-principal investigator (with D. Hyrenbach), 2008-2009.

TEACHING EXPERIENCE:

- State University of New York at Geneseo, Dept. of Physics and Astronomy. *General Physics I Laboratory*, Fall 2010.
- Sea Education Association and Boston University Marine Program. *Tropical Oceanography of the Caribbean Sea* (onshore), Fall 2008, 2009. *Tropical Oceanography of the Caribbean Sea: Applications and Research* (at sea), Fall 2008.
- Sea Education Association, SEA Semester: Oceans & Climate Program. *Oceans in the Global Carbon Cycle* (onshore), Fall 2006, 2007. *Oceanography Research in Oceans and Climate* and *Oceanographic Research Techniques* (at sea), Fall 2007.
- Sea Education Association and Stanford University, Stanford@SEA Program. *Introduction to Oceanography I* and *Problems in Oceanography II* (onshore), *Oceanographic Research Techniques* (at sea). Spring 2005.
- Sea Education Association, SEA Semester: Ocean Exploration. *Oceanography* (onshore), *Practical Oceanography I and II* (at sea). Seven semesters from 2003-2008.
- Woods Hole Oceanographic Institution, Physical Oceanography Dept., Postdoctoral Teaching Fellow. *Introduction to Observational Physical Oceanography*, Fall 2002.
- Scripps Institution of Oceanography, Physical Oceanography Dept., Teaching Assistant. *Introduction to Physical Oceanography*, Fall 1997.

CRUISE EXPERIENCE:

- SSV *Robert C. Seamans*, Plastics at SEA: North Pacific Expedition, North Pacific Ocean, October 2-November 9, 2012, Principal investigator (shore). Research expedition dedicated to studying the distribution and ecological impacts of floating plastic marine debris.
- SSV *Corwith Cramer*, Plastics at SEA: North Atlantic Expedition, North Atlantic Ocean, June 10-July 14, 2010, Principal investigator (shore). Research cruise dedicated to studying the abundance and distribution of floating plastic marine debris.
- Chief Scientist on ten oceanographic cruises (each 4-6 weeks) leading at-sea research component of SEA Semester program, SSV *Corwith Cramer* (Atlantic and Caribbean) and SSV *Robert C. Seamans* (Pacific), 2003-2008.
- R/V *Knorr*, WOCE A-24 Hydrographic Survey, North Atlantic Ocean, May 30–July 4, 1997, Chief Scientist Lynne D. Talley. Hydrographic sampling and salinity analysis.
- R/V *Robert Gordon Sproul*, Santa Barbara Channel–Santa Maria Basin Circulation Study, August 22–29, 1996, Chief Scientist Clinton D. Winant. Mooring deployment and recovery.
- Able Seaman license (United States Coast Guard; expired)

PROFESSIONAL AND COMMUNITY SERVICE:

- Member of Scientific Advisory Board, Ocean Diagnostics Inc., Victoria, British Columbia, 2019-.
- Participant and Co-Group Leader, Plastic Awareness Global Initiative: Ocean Science Workshop, Scripps Institution of Oceanography, La Jolla, CA, Oct. 2018.

- Witness, U.S. Senate Committee on Environment and Public Works Hearing on: “Cleaning Up the Oceans: How to Reduce the Impact of Man-Made Trash on the Environment, Wildlife, and Human Health?”, Washington, DC, Sept. 28, 2018.
- Science advisor, San Francisco Estuary Institute Microplastic Workgroup, Richmond, CA, 2019-2019.
- Participant, Arctic Expert Meetings, Harvard Kennedy School, Cambridge, MA, Mar. 2018.
- Session chair and moderator (with E. van Sebille, Utrecht U.; S. Aliani, CNR), *Transport and Fate of Marine Debris in the Ocean and Shelf-Seas: Theory, Modeling and Observations*, 6th International Marine Debris Conference, San Diego, CA, Mar. 2018.
- Session chair and moderator (with E. van Sebille, Utrecht U.; N. Maximenko, U. Hawaii; S. Aliani, CNR), *Detection, Analysis and Modeling of the Distribution and Transport of Oceanic Debris*, Ocean Sciences Meeting, Portland, OR, Feb. 2018.
- Participant, Nature Sustainability – Tsinghua University International Forum: *Re-thinking interdisciplinary research for global sustainability*, Beijing, China, Jan. 2018.
- Vice-Chair, SCOR Working Group 153: Floating Litter and its Oceanic Transport Analysis and Modeling (FLOTSAM), 2017-2020.
- Participant, EPA Microplastics Expert Workshop, Crystal City, VA, Jun. 2017.
- Participant and speaker, NOAA Gulf of Maine Marine Debris Planning Workshop, Portland, ME, Jun. 2017.
- Participant and panelist, G20 High Level Conference on Marine Litter, Bremen, Germany, May-Jun. 2017.
- Participant and keynote speaker, G20 Workshop on Marine Litter, Hamburg, Germany, Mar. 2017.
- Participant, Widening the scope of the G7 Action Plan to Combat Marine Litter: Workshop to consider future steps and implementation, Bremen, Germany, Oct. 2016.
- Session chair and moderator (with Amy Uhrin, NOAA; Jenna Jambeck, U. Georgia, and Julia Parrish, U. Washington), *The Emerging Science of Marine Debris: From Assessment to Knowledge that Informs Solutions*, Ocean Sciences Meeting, New Orleans, LA, Feb. 2016.
- Participant, NASA workshop on Mission Concepts for Marine Debris Sensing, Honolulu, HI, Jan. 2016.
- Participant, NOAA workshop on Marine Debris Planning in the Gulf of Maine, Rye, NH, Nov. 2015.
- Participant, Expert and Stakeholder Workshop on the G7 Action Plan to Combat Marine Litter, Berlin, Germany, Aug. 2015.
- Graduate student committees: Zora McGinnis (MS; Hawaii Pacific Univ.), Caitlin Wessel (PhD; Dauphin Island Sea Lab, Univ. South Alabama), Catharina Pieper (PhD; Universidade dos Açores), Zola Roper (MS; Univ. of Virgin Islands).
- Board of Directors, Gulf of Maine Marine Education Association (GOMMEA), 2014-2017.
- Member, Editorial board of MarineDebris.Info (<http://www.marineaffairs.org/marinedebris.html>), 2013-present.
- Advisory member, Trash Free Seas Alliance, Ocean Conservancy. 2012-present.
- Speaker and participant, JPI Oceans Microplastic Workshop, Ostend, Belgium (via Skype), Jan. 2015.
- Participant, National Academy of Sciences Discussion Forum: Micro-plastics in the marine environment & potential human health risks, Washington, DC, Apr. 2014.
- Participant, GEF Transboundary Waters Assessment Programme workshop on floating macro- and micro-plastics in the global ocean, Woods Hole, MA, Mar. 2014.
- Member, Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) Working Group 40: Sources, fate and effects of micro-plastics in the environment – a global assessment, 2012-2015.
- Co-Principal Investigator, National Center for Ecological Analysis and Synthesis (NCEAS) Working Group on Marine Debris, 2011-2017.
- Member, Ocean Health Index Scientific Research Team, 2010-2012.
- Workshop convener (with Dr. Nikolai Maximenko, University of Hawai’i), *Hydrodynamics of Marine Debris Workshop*, 5th International Marine Debris Conference, Honolulu, HI, Mar. 2011.
- Session convener and chair (with Dr. Christopher Reddy, Woods Hole Oceanographic Institution), *Plastic Debris in the Ocean: Quantifying the Problem and Investigating Its Impacts*, Ocean Sciences Meeting, Portland, OR, Feb. 2010.
- Session chair, “New global perspectives: What were our observational capabilities in 1980? What are they now and how has WOCE helped? What might be our capability in 2010? In 2050?”, WOCE and Beyond Conference, San Antonio, TX, Nov. 2002.
- Peer reviewer of research proposals for The Icelandic Research Fund; The Technology Foundation of the Netherlands Organisation for Scientific Research; German Scientific Commission of Lower Saxony; Joint Programming Initiative Oceans; Swiss National Science Foundation; Kuwait Foundation for the Advancement of Sciences; National Environmental Research Council (UK), U.S. National Science Foundation.
- Peer reviewer of education proposal for U.S. National Science Foundation.

- Peer reviewer of research articles for *Annales Geophysicae*; *Archives of Environmental Contamination and Toxicology*; *Deep-Sea Research*; *Environmental Pollution*; *Environmental Research Letters*; *Environmental Science and Pollution Research*; *Environmental Science and Technology*; *Estuarine, Coastal and Shelf Science*; *Geophysical Research Letters*; *Journal of Atmospheric and Oceanic Technology*; *Journal of Geophysical Research-Oceans*; *Journal of Physical Oceanography*; *Marine Environmental Research*; *Marine Pollution Bulletin*; *Nature*; *Oceanography*; *PLOS ONE*; *Science*; *Scientific Reports*; *Water Research*.
- Member of American Geophysical Union (AGU), The Oceanography Society (TOS), National Association of Geoscience Teachers (NAGT), National Marine Educators Association (NMEA).
- Provide interviews to international print, web and radio journalists on the topic of plastic marine debris, including *NPR Science Friday*, *Popular Mechanics*, *Nature News*, *Science Magazine*, *Science News*, *National Geographic News*, *The Economist*, *New Scientist*, *Associated Press*, *National Geographic*, 2009-present.
- Executive committee member, Woods Hole Science and Technology Education Partnership (WHSTEP), Woods Hole, MA, 2006-2009.
- Chair of search committee for Oceanography Faculty position resulting in successful hire of Dr. Amy N.S. Siuda, Sea Education Association, 2007.
- Co-designed a mentorship program for junior women in physical oceanography at the Mentoring Physical Oceanography Women to Increase Retention (MPOWIR) workshop, Warrenton, VA, Oct. 2005.
- Co-advised an undergraduate student in the Summer Student Fellow and Minority Fellow undergraduate research program, Woods Hole Oceanographic Institution, 2002.
- Guided an “*Ethics in Science*” discussion in Summer Student Fellow and Minority Fellow undergraduate research program, Woods Hole Oceanographic Institution, Jul. 2002.
- Co-founded and established directives as first Co-Chair of Students@SIO, a graduate student organization, Scripps Institution of Oceanography, 2000-2001.
- Motivated discussion and wrote a summary of student opinion (physical oceanography) for the 10-year review of the graduate department, providing specific suggestions to improve the graduate program at Scripps Institution of Oceanography, 1999.
- Volunteer science judge, National Ocean Sciences Bowl, La Jolla, CA, 1998-2000.
- Actively investigated the attrition of women graduate students and co-authored a memo that spearheaded new programs for graduate students in physical oceanography at Scripps Institution of Oceanography, 1996.

PUBLICATIONS (PEER-REVIEWED):

- Maximenko, N., P. Corradi, **K. L. Law**, E. van Sebille, S. Garaba, R. S. Lampitt, F. Galgani, V. Martinez-Vicente, *et al.* (62 authors), 2019. Toward the integrated marine debris observing system. *Front. Mar. Sci.* **6**, 447, doi: 10.3389/fmars.2019.00447.
- Pieper, C., L. Amaral-Zettler, **K. L. Law**, C. M. Loureiro, A. Martins, 2019. Application of matrix scoring techniques to evaluate marine debris sources in the remote islands of the Azores Archipelago. *Env. Poll.* **249**, 666-675, doi:10.1016/j.envpol.2019.03.084.
- Koelmans, A. A., M. Kooi, **K. L. Law**, E. van Sebille, 2017. All is not lost: Deriving a top-down mass budget of plastic at sea. *Environ. Res. Lett.*, **12**, 114028, doi:10.1088/1748-9326/aa9500.
- Geyer, R., J. R. Jambeck and **K. L. Law**, 2017. Production, use, and fate of all plastics ever made. *Sci. Adv.* **3**, e1700782.
- Law, K. L.**, 2017. Plastics in the marine environment. *Ann. Rev. Mar. Sci.* 9:10.1–10.25.
- Palter, J., C.-A. Caron, **K. L. Law**, J. K. Willis, D. S. Trossman, I. M. Yashayaev and D. Gilbert, 2016. Variability of the directly-observed, mid-depth subpolar North Atlantic circulation. *Geophys. Res. Lett.*, **43**, 2700-2708, doi:10.1002/2015GL067235.
- Kukulka, T., **K. L. Law** and G. Proskurowski, 2016. Evidence for the influence of surface heat fluxes on turbulent mixing of microplastic marine debris. *J. Phys. Oceanogr.*, **46**, 809-815, doi:10.1175/JPO-D-15-0242.1.
- Van Sebille, E., C. Wilcox, L. Lebreton, N. Maximenko, B. D. Hardesty, J. A. van Franeker, M. Eriksen, D. Siegel, F. Galgani and **K. L. Law**, 2015. A global inventory of small floating plastic debris. *Environ. Res. Lett.*, **10**, 124006, doi:10.1088/1748-9326/10/12/124006. Selected as one of 25 articles in “Highlights of 2015” by *Environmental Research Letters*.
- Brunner, K., T. Kukulka, G. Proskurowski and **K. L. Law**, 2015. Passive buoyant tracers in the ocean surface boundary layer: 2. Observations and simulations of microplastic marine debris. *J. Geophys. Res. Oceans*, **120**, 7559-7573, doi:10.1002/2015JC010840.
- Van Franeker, J. A. and **K. L. Law**, 2015. Seabirds, gyres and global trends in plastic pollution. *Environ. Poll.*, **203**, 89-96, doi:10.1016/j.envpol.2015.02.034.

- Jambeck, J. R., R. Geyer, C. Wilcox, T. R. Siegler, M. Perryman, A. Andrady, R. Narayan and **K. L. Law**, 2015. Plastic waste inputs from land into the ocean. *Science*, 347, 768-771, doi:10.1126/science.1260352. Featured as #27 in the Altmetric Top 100 2015 list of widely discussed and shared academic papers.
- Law, K. L.**, S. E. Morét-Ferguson, D. S. Goodwin, E. R. Zettler, E. DeForce, T. Kukulka and G. Proskurowski, 2014. Distribution of surface plastic debris in the eastern Pacific Ocean from an 11-year dataset. *Environ. Sci. Technol.*, 48, 4732-4738.
- Kukulka, T., G. Proskurowski, S. Morét-Ferguson, D. Meyer and **K. L. Law**, 2012. The effect of wind mixing on the vertical distribution of buoyant plastic debris: Observations and modeling. *Geophys. Res. Lett.*, 39, L07601, doi:10.1029/2012GL051116.
- Law, K. L.**, S. Morét-Ferguson, N. A. Maximenko, G. Proskurowski, E. E. Peacock, J. Hafner and C. M. Reddy, 2010. Plastic accumulation in the North Atlantic subtropical gyre. *Science*, 329, 1185-1188.
- Morét-Ferguson, S., **K. L. Law**, G. Proskurowski, E. K. Murphy, E. E. Peacock and C. M. Reddy, 2010. The size, mass, and composition of plastic debris in the western North Atlantic Ocean. *Mar. Poll. Bull.*, 60, 1873-1878.
- Palter, J.B., M.S. Lozier and **K. L. Lavender**, 2008. How Does Labrador Sea Water Enter the Deep Western Boundary Current? *J. Phys. Oceanogr.*, 38, 968-983.
- Lavender, K. L.**, W. B. Owens and R. E. Davis, 2005. The Mid-depth Circulation of the Subpolar North Atlantic Ocean as Measured by Subsurface Floats. *Deep-Sea Res.*, 52, 767-785.
- Lilly, J. M., P. B. Rhines, F. Schott, **K. L. Lavender**, J. R. N. Lazier, U. Send and E. D'Asaro, 2003. Observations of the Labrador Sea eddy field. *Prog. Oceanogr.*, 59, 75-176.
- Straneo, F., R. S. Pickart and **K. L. Lavender**, 2003. Spreading of Labrador Sea Water: An advective-diffusive study based on Lagrangian data. *Deep-Sea Res.*, 50, 701-719.
- Lavender, K. L.**, R. E. Davis and W. B. Owens, 2002. Observations of open-ocean deep convection in the Labrador Sea from subsurface floats. *J. Phys. Oceanogr.*, 32, 511-526.
- Lavender, K. L.**, R. E. Davis and W. B. Owens, 2000. Mid-depth recirculation observed in the interior Labrador and Irminger seas by direct velocity measurements. *Nature*, 407, 66-69.

OTHER PUBLICATIONS:

- Irwin, E. G., P. J. Culligan, M. Fischer-Kowalski, **K. L. Law**, R. Murtugudde and S. Pфирman, 2018. Bridging barriers to advance global sustainability. *Nat. Sustain.*, 1, 324-326.
- Kukulka, T. and **K. L. Law**, 2016. Upper ocean turbulence and its influence on microplastic particle transport. *J. Ocean Technol.*, 11, 96-97.
- Law, K. L.** and E. van Sebille, 2016. Far more microplastics floating in oceans than thought. *The Conversation*, 7 January 2016, <https://theconversation.com/far-more-microplastics-floating-in-oceans-than-thought-51974>.
- GESAMP, 2015. Sources, fate and effects of microplastics in the marine environment: a global assessment. (Kershaw, P. J., ed.). (IMO/FAO/UNESCO-IOC/UNIDO/WMO/IAEA/UN/UNEP/UNDP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection). Rep. Stud. GESAMP No. 90, 96 pp.
- Law, K. L.** and R. C. Thompson, 2014. Microplastics in the seas. *Science* **345**, 144-145, doi:10.1126/science.1254065.
- Law, K. L.**, 2013. What Does the Garbage Patch Really Look Like? Ocean Health Index blog, 15 April 2013, http://www.oceanhealthindex.org/News/StoriesWhat_Does_the_Garbage_Patch.
- Law, K. L.**, 2012. Career profiles-options and insights: Kara Lavender Law. *Oceanography*, 25 (1), 311-312.
- Law, K. L.**, 2012. Afloat in the Field. In Kastens, K.A., and Manduca, C.A., eds., *Earth and Mind II: A Synthesis of Research on Thinking and Learning in the Geosciences: Geological Society of America Special Paper 486*, 165-166, doi:10.1130/2012.2486(25).
- Law, K. L.** and M.C. Goldstein, 2012. "The Ocean's 'Garbage Patches': What They Are and How They Impact the Ocean Ecosystem". Brooks/Cole Enrichment Module (textbook chapter), Brooks/Cole, Belmont, CA, 29 pp.
- Law, K. L.** and N. Maximenko, 2011. Understanding Sources, Sinks, and Transport of Marine Debris. Meetings Report, *Eos*, 92 (28), 235.
- Law, K. L.**, 2011. Plastic Marine Debris: Perspectives from SEA. *Flotsam and Jetsam* (Quarterly journal of Massachusetts Marine Educators), Spring 2011 issue.
- Lozier, M.S., A. Adcroft, L. Beal, A. Bower, D. Byrne, A. Capotondi, V. Coles, **K. Lavender**, C.M. Lee, J. MacKinnon, K. Shearman, L. St. Laurent, L. Thompson and D. Witter, 2006. MPOWIR: Mentoring physical oceanography women to increase retention. Report of a workshop held October 9-12, 2005. 32 pp. Available at: <http://www.mpowir.org>.
- Pickart, R. S. and **K. L. Lavender**, 2000: Is Labrador Sea Water formed in the Irminger basin? *International WOCE Newsletter*, 39, 6-8.

PRESENTATIONS, PANELS and WORKSHOPS:

- Panelist, “Science on the Hill: Solving the Plastic Waste Problem”, convened by *Scientific American* and Nature Research (Springer Nature), Washington, DC, Jun. 2019.
- Invited speaker, University of Connecticut, Avery Point, The Coastal Perspectives Lecture Series, Groton, CT, Apr. 2019.
- Invited speaker, Avenues: The World School, Zero Waste event; and guest speaker in 2nd and 5th grades, New York, NY, Apr. 2019.
- Invited speaker, Franklin and Marshall College, Common Hour Lecture, Lancaster, PA, Apr. 2019.
- Invited speaker, Northeastern University, Marine Science Center, Nahant, MA, Mar. 2019.
- Panelist, “Marine Litter: The Last Straw?”, Solid Waste Association of North America SWANapalooza conference, Boston, MA, Feb. 2019.
- Invited speaker, University of Maine, School of Marine Sciences, Orono, ME, Feb. 2019.
- Invited speaker, Falmouth Forum, Marine Biological Laboratory, Woods Hole, MA, Jan. 2019.
- Invited speaker, Eckerd College, St. Petersburg, FL, Oct. 2018.
- Invited speaker, College of Marine Science, University of South Florida, St. Petersburg, FL, Oct. 2018.
- Invited speaker, Bren School, University of California, Santa Barbara, Santa Barbara, CA, May 2018.
- Invited speaker, The Second International Symposium on Marine Microplastic Pollution and Control (ISMP 2018), East China Normal University, Shanghai, China, Apr. 2018.
- Invited speaker, Woodin Environmental Studies Colloquium, Middlebury College, Middlebury, VT, Apr. 2018.
- Guest on WCAI/WGBH radio show, Living Lab with Heather Goldstone, Mar. 2018.
- Invited speaker, Falmouth Water Stewards, Falmouth, MA, Mar. 2018.
- 6th International Marine Debris Conference, San Diego, CA, Mar. 2018 (Plenary panelist; oral and poster presentations, co-author on additional presentation).
- Ocean Sciences Meeting, Portland, OR, Feb. 2018 (Oral presentation, co-author on additional presentation).
- Invited speaker, Dept. of Fisheries Oceanography seminar, Univ. of Massachusetts-Dartmouth/SMAST, Oct. 2017.
- Invited speaker, German Federal Institute of Hydrology (BfG) Summer School on “Plastics in Freshwater and Marine Environments”, Koblenz, Germany, Jul. 2017.
- Invited speaker, Marine Debris Dialogue: A Conversation on Solutions, sponsored by the American Chemistry Council, Newport, RI, Jun. 2017.
- Panelist, Environmental Film Festival at Yale (EFFY), Yale University, Apr. 2017.
- Invited speaker, President’s Course, Middlebury College, Middlebury, VT, Apr. 2017.
- Webinar presentation, EPA Trash Free Waters Program, Feb. 2017.
- Keynote speaker, German Water Chemistry Society 7th Late Summer Workshop on “Microplastics in the aquatic environment”, Haltern am See, Germany, Sept. 2016.
- Speaker, International Visitor Leadership Program (U.S. Dept. of State), Woods Hole Oceanographic Institution, Jun. 2016.
- MICRO 2016 meeting, Lanzarote, Spain, May 2016 (oral presentation).
- Invited speaker, Marine Science Seminar, University of New England, Apr. 2016.
- Invited speaker, Planet Ocean Seminar Series, University of North Carolina, Wilmington, Apr. 2016.
- Guest on WGBH television show, America ReFramed, “Divide in Concord” episode, Mar. 2016.
- Ocean Sciences Meeting, New Orleans, LA, Feb. 2016 (Poster and co-author on five additional presentations).
- Speaker, TransAtlantic Science Week conference, Boston, MA, Oct. 2015.
- Senior scientist mentor, Mentoring Physical Oceanography Women to Increase Retention (MPOWIR) Pattullo Conference, Warrenton, VA, Oct. 2015.
- Guest on WCAI radio show, The Point with Mindy Todd, Aug. 2015.
- Speaker and panelist, SustPack 2015 (conference on sustainable packaging), Orlando, FL, Mar. 2015.
- Speaker at the opening reception for “*Gulf of Maine*”, an art exhibition at The Whitney Galleries, Wells, ME, Mar. 2015.
- ASLO Aquatic Sciences Meeting, Grenada, Spain, Feb. 2015.
- Speaker and panelist, press briefing at 2015 AAAS Meeting, San Jose, CA, Feb. 2015.
- Invited speaker, Oceanography and Climate Sack Lunch Seminar Series, Massachusetts Institute of Technology, Cambridge, MA, Jan. 2015.

- Invited speaker in undergraduate and graduate classes at Duke University, Johns Hopkins University, University of Texas-Austin, Syracuse University, Ithaca College, University of Delaware, Maine Maritime Academy, and University of New England.
- Panelist, Vermont Journal of Environmental Law Symposium, *Cradle-to-Cradle: The Elimination of Waste*, Vermont Law School, South Royalton, VT, Oct. 2014.
- Invited speaker, Camden Yacht Club, Camden, ME, Jul. 2014.
- Invited speaker, Waynflete School *Sustainable Ocean Studies* high school summer program, Portland, ME, Jul. 2014.
- Invited speaker, Gordon Research Conference: *Environmental Sciences: Water*, Holderness, NH, Jun. 2014.
- Invited speaker, Gulf of Maine Marine Education Association and Waynflete School, Portland, ME, Apr. 2014.
- King Middle School, Portland, ME, Mar. 2014. Invited speaker to four 6th grade science classes.
- Ocean Sciences Meeting, Honolulu, HI, Feb. 2014. (Co-author on two presentations).
- SEA Faculty Lecture Series, Woods Hole, MA, Jan. 2014.
- Invited speaker, SETAC North America Annual Meeting, Nashville, TN, Nov. 2013.
- Invited speaker, Maine Resource Recovery Association, Rockport, ME, Apr. 2013.
- Sea Education Association, Semi-annual trustees and overseers meeting, Woods Hole, MA, Nov. 2012.
- Invited speaker, Marine Environmental Research Institute, Blue Hill, ME, Oct. 2012.
- Invited speaker, George Stevens Academy, AP Environmental Science class. Blue Hill, ME, Oct. 2012.
- Invited speaker, Gordon Research Conference: *Oceans and Human Health*, Biddeford, ME, Jun. 2012.
- Invited speaker, University of Delaware, School of Marine Science and Policy, Newark, DE, Apr. 2012.
- Virtual Scientist/Science Screen Report presentation, Cesar E. Chavez High School, Santa Ana, CA, Dec. 2011.
- Invited speaker, National Center for Ecological Analysis and Synthesis EcoLunch Seminar, University of California, Santa Barbara, Santa Barbara, CA, Oct. 2011.
- Invited speaker, Metcalf Institute for Marine and Environmental Reporting, Graduate School of Oceanography, University of Rhode Island, Narragansett, RI, Jul. 2011.
- Invited speaker, Sea Education Association, 40th Anniversary Alumni Reunion, Woods Hole, MA, June 2011.
- Panelist, *Seas of Plastic* panel, Blue Vision Summit 3, Washington, DC, May 2011.
- *Hydrodynamics of Marine Debris Workshop*, 5th International Marine Debris Conference, Honolulu, HI, Mar. 2011. (Talk)
- 5th International Marine Debris Conference, Honolulu, HI, Mar. 2011. (Talk; co-author on additional talks)
- Keynote speaker, U.S. Sailing National Sailing Programs Symposium, Clearwater Beach, FL, Jan. 2011.
- Invited speaker, Industrial Environmental Management Program, School of Forestry and Environmental Studies, Yale University, *Producers, Packaging and Public Policy* Speaker Series, New Haven, CT, Jan. 2011.
- NOAA Second Research Workshop on Microplastic Debris, Tacoma, WA, Nov. 2010. (Poster, participant)
- Invited speaker, Physics Department Colloquium, SUNY-Geneseo, Geneseo, NY, Oct. 2010.
- Ocean Sciences Meeting, Portland, OR, Feb. 2010. (Talk; co-author on additional presentations)
- Invited speaker, Ocean Explorium Ocean Voice Series, New Bedford, MA, Nov. 2009.
- Invited speaker, Massachusetts Maritime Academy Environmental Symposium, Buzzards Bay, MA, Apr. 2009.
- Invited speaker, Sail Martha's Vineyard Black Dog Supper Lecture Series, Vineyard Haven, MA, Feb. 2009.
- American Society of Limnology and Oceanography Meeting, Nice, France, Feb. 2009. (Poster)
- Ocean Sciences Meeting, Orlando, FL, Feb. 2008. (Poster co-author)
- Participant, *History of Science-Oceans and Atmospheres*, Dibner Institute Seminar, Woods Hole, MA, May 2006.
- Annual Meeting of AAAS Pacific Division, San Diego, CA, Jun. 2006. (Poster co-author)
- US CLIVAR Salinity Workshop, Woods Hole, MA, May 2006. (Poster co-author)
- Participant, *Scientific Inquiry in the K-12 Classroom*, WHOI/COSEE-NE Workshop, Woods Hole, MA, Apr. 2006.
- Invited speaker, Marine Science and Environmental Studies Department Seminar, University of San Diego, Sep. 2006.
- Invited speaker, Department of Biological Sciences Summer Seminar, Wellesley College, Jun. 2006.
- Fall Meeting of the American Geophysical Union, San Francisco, CA, Dec. 2005. (Two posters)
- *Teaching about the Ocean System Using New Research Techniques: Data, Models and Visualization*, On the Cutting Edge Workshop, Seattle, WA, Jul. 2005. (Poster, participant)
- Invited speaker, Science Safari, Woods Hole Science Technology and Education Partnership, Apr. 2004.
- Invited speaker, *Current Topics in Ocean Research*, Cape Cod Consortium course for teachers, Woods Hole, MA, 2003.
- WOCE and Beyond Conference, San Antonio, TX, Nov. 2002. (Poster)

- Ocean Sciences Meeting, Honolulu, HI, Feb. 2002. (Talk)
- Invited speaker, Physical Oceanography Department Seminar, Southampton Oceanography Centre, 2001.
- Invited speaker, Oceanography Sack Lunch Seminar, Massachusetts Institute of Technology, 2001.
- Physical Oceanography Department Seminar, Woods Hole Oceanographic Institution, 2001. (Talk)
- Invited speaker, Fall Meeting of the American Geophysical Union, San Francisco, CA, Dec. 2000.
- Ocean Sciences Meeting, San Antonio, TX, Jan. 2000. (Talk)
- Ocean Sciences Meeting, San Diego, CA, Feb. 1998. (Talk)