Christopher Bassett

Applied Physics Laboratory
University of Washington
Seattle, WA

Phone: (206) 543-1263
Email: cbassett@uw.edu

Education

2013	**Ph.D.** Mechanical Engineering, University of Washington
2010	**M.S.** Mechanical Engineering, University of Washington
2007	**B.S.** Mechanical Engineering, University of Minnesota

Professional Experience

2025–pres.	Research Scientist/Engineer Principal Ocean Engineering Dept., Applied Physics Laboratory, University of Washington
2019–2024	Senior Mechanical Engineer Ocean Engineering Dept., Applied Physics Laboratory, University of Washington
2019–pres.	Affiliate Assistant Professor Department of Mechanical Engineering, University of Washington
2016–2019	Ocean Acoustics Engineer Resource Assessment and Conversation Engineering Division Alaska Fisheries Science Center, National Marine Fisheries Service (NOAA)
2015–2016	Postdoctoral Research Associate Joint Institute for the Study of the Atmosphere and Ocean Applied Physics Laboratory, University of Washington Alaska Fisheries Science Center (NOAA)
2013–2015	Post-doctoral Scholar Fellow, Dept. of Applied Ocean Physics & Engineering Woods Hole Oceanographic Institution
2009–2013	Graduate Research Assistant, Mechanical Engineering/Applied Physics Laboratory University of Washington
2008–2009	Teaching Assistant, Department of Physics, University of Washington

Peer-Reviewed Publications

J.1 **C. Bassett**, P. Gibbs, H. Wood, R.J. Cavagnaro, B. Cunningham, J. Dosher, J. Joslin, and B. Polagye . Lessons learned from the design and operation of a small-scale cross-flow tidal turbine. *submitted to Journal of Ocean Engineering and Marine Energy*.

J.2 Levine, R., **C. Bassett**, and A. De Robertis, (2025). Comparable estimates of volume scattering from narrowband and broadband echosounder signals (*submitted to ICES Journal of Marine Science*).

J.3 Polagye, B., A. Hunt, and **C. Bassett**. Approaches to attributing underwater noise to a wave energy converter. *submitted to JASA Express Letters*.

J.4 Polagye, B.P., C. Crisp, L. Jones, P. Murphy, J. Noe, G. Colandra, and **C. Bassett**. Performance of a Drifting Acoustic Instrumentation SYstem (DAISY) for Characterizing Radiated Noise from Marine Energy Converters. *Journal of Ocean Engineering and Marine Energy*. DOI: 10.1007/s40722-024-00358-6.

J.5 Levine, R., A. De Robertis, **C. Bassett**, M. Levine, and J.N. Ianelli (2024). Acoustic observations of walleye pollock (*Gadus chalcogrammus*) migration across the U.S.-Russia boundary in the northwest Bering Sea. *ICES Journal of Marine Science*, 81(6), 1111-1125.

J.6 Marston, T., B.R. Hall, **C. Bassett**, D. Plotnick, D.S. Plotnick, and A. Kidwell (2024). Motion tracking of fish and bubble clouds in synthetic aperture sonar data, *Journal of the Acoustical Society of America*, 155(3), 2181-2191.

J.7 Derakhti, M., J. Thomson, M. Malila, J. Kirby, and **Bassett, C.** (2024). Statistics of bubble plumes generated by breaking surface waves. *Journal of Geophysical Research: Oceans*, 29, e2023JC019753.

J.8 Geyer, W.R., D.K. Ralston, J. Jurisa, D. Honneger, **C. Bassett**, and M. Haller (2024). The Structure and Dynamics of an Estuarine Tidal Intrusion Front. *Journal of Geophysical Research: Oceans*, 129, e2023JC020371.

J.9 Urmy, S., A. De Robertis, and **C. Bassett** (2024). A Bayesian inverse approach to identify and quantify organisms from fisheries acoustic data, *ICES Journal of Marine Science*, 81(7), 1461–1477.

J.10 **Bassett, C.**, A.C. Lavery, W.R. Geyer, J. Jurisa, D. Ralston, J. Thomson, D.A. Honneger, A. Simpson, M.E. Scully, and M.C. Haller (2023). Acoustic backscattering at a tidal intrusion front, *Progress in Oceanography*, 219, 103167.

J.11 Marston, T., **C. Bassett**, D. Plotnick, A. Kidwell, and D. Honneger (2023). Three-dimensional observations of tidal plume fronts in estuaries using a synthetic aperture sonar array, *Journal of the Acoustical Society of America*, 154(2), 1124–1137.

J.12 Cotter, E, **Bassett, C.**, and A.C. Lavery (2021). Comparison of mesopelagic organism abundance estimates using in situ target strength measurements and echo-counting techniques, *JASA Express Letters*, 1, 040801, 1-6.

J.13 Cotter, E, **C. Bassett**, and A.C. Lavery. Classification of broadband target spectra in the mesopelagic using physics-informed machine learning (2021), *Journal of the Acoustical Society of America*, 149(6), 3889–3901.

J.14 **Bassett, C.**, A.C. Lavery, T.K. Stanton, and E. Cotter (2020). Frequency- and depth- dependent target strength measurements of individual mesopelagic scatterers, *Journal of the Acoustical Society of America*, 148(2), EL153-EL158.

J.15 Polagye, B., J. Joslin, P. Murphy, E. Cotter, M. Scott, P. Gibbs, **C. Bassett**, and A. Stewart (2020). Adaptable Monitoring Package development and deployment: Lessons learned for integrated instrumentation at marine energy sites, *Journal of Marine Science and Engineering*, 8(553), 1–28.

J.16 **Bassett, C.**, T. Lyons, A.C. Lavery, J. Wilkinson, and T. Maksym (2020). Direct inference of first-year ice thickness using broadband acoustic backscattering, *Journal of the Acoustical Society of America*, 147(2), 824-838.

J.17 Cotter, E., P. Murphy, **C. Bassett**, B. Williamson, and B. Polagye (2019). Acoustic characterization of sensors for marine environmental monitoring, *Marine Pollution Bulletin*, 144, 205-215.

J.18 De Robertis, A., **C. Bassett***, L.N. Andersen, I. Wangen, S. Furnish, and M. Levine (2019). Amplifier linearity accounts for discrepancies in echo-integration measurements from two widely used echosounders, *ICES Journal of Marine Science*, 76(6), 1882-1892.
*Denotes equal contributions to the manuscript were made by the first two authors.

J.19 Loranger, S. **C. Bassett**, J.P. Cole, B. Boyle, and T. Weber (2018). Acoustically relevant properties of four crude oils at oceanographic temperatures and pressures, *Journal of the Acoustical Society of America*, 144(5), 2926-2936.

J.20 **Bassett, C.**, A. De Robertis, and C. Wilson (2018). Broadband echosounder measurements of the frequency response of fishes and euphausiids in the Gulf of Alaska, *ICES Journal of Marine Science*, 75(3), 1131-1142.

J.21 Lavery, A.C., **C. Bassett**, M. Jech, and G. Lawson (2017). Exploiting signal processing approaches for broadband echosounders, *ICES Journal of Marine Science*, 75(8), 2262-2275.

J.22 Demer, D.A., R. Korneliussen, L.N. Andersen, **C. Bassett**, L. Berger, D. Chu, J. Condiotty, G.R. Cutter Jr., *et al.* (2017). 2016 USA-Norway EK80 Workshop Report: Evaluation of a wideband echosounder for fisheries and marine ecosystem science, *ICES Cooperative Research Report No. 336*.

J.23 **Bassett, C.**, A.C. Lavery, T. Maksym, and J. Wilkinson (2016). Broadband acoustic backscatter from crude oil under laboratory-grown sea ice. *Journal of the Acoustical Society of America*, 140(4), 2274-2287.

J.24 **Bassett, C.**, A.C. Lavery, T. Maksym, and J. Wilkinson (2015). Laboratory measurements of high-frequency, acoustic broadband backscattering from sea ice and crude oil. *Journal of the Acoustical Society of America*, 137(1), EL32-EL38.

J.25 **Bassett, C.**, J. Thomson, P. Dahl and B. Polagye (2014). Flow-noise and turbulence in two tidal channels. *Journal of the Acoustical Society of America*, 135(4), 1764-1774.

J.26 **Bassett, C.**, J. Thomson, and B. Polayge (2013). Ambient noise and bed stress in a tidal channel. *Journal of Geophysical Research – Oceans*, 118, 1-17.

J.27 **Bassett, C.**, B. Polayge, J. Thomson, and M. Holt (2012). A vessel noise budget for Admiralty Inlet, Puget Sound, WA (USA). *Journal of the Acoustical Society of America*, 132(6), 3706-3719.

Conference Proceedings

C.1 **Bassett, C.**, A.C. Lavery, B. Petitt, and S. Loranger. Autonomous platforms for measuring broadband backscatter. *Proc. Mtgs. Acoust.*, 47, 005001, 2021.

C.2 **Bassett, C.** and A.C. Lavery. Observations of high-frequency, excess attenuation due to bubble plumes at estuarine fronts, *Proc. Mtgs. Acoust.*, 47, 005001, 2021.

C.3 Pegau, W.S., J. Garron, L. Zabilansky, **C. Bassett**, J. Bello, J. Bradford, R. Carns, Z. Courville, H. Eicken, B. Elder, P. Eriksen, A. Lavery, B. Light, T. Maksym, H.P. Marshall, M. Oggier, D. Perovich, P. Pocwiardowski, H. Singh, D. Tang, C. Wiggins, and J. Wilkinson. Detection of oil in and under ice. *International Oil Spill Conference Proceedings*. Long Beach, CA. May 15-18, 2017.

C.4 Wilkinson, J. T. Maksym, **C. Bassett**, A.C. Lavery, H. Singh, D. Chayes, P. Elosegui, P. Wadhams, K. Ulrich-Evers, and P. Jochmann. Experiments on the detection and movement of oil spilled under sea ice. *Proceedings of the HYDRALAB IV Joint User Meeting*. Lisbon, Portugal. July 2-4, 2014.

C.5 **Bassett, C.**, A.C. Lavery, and T. Maksym. Laboratory measurements of high-frequency, broadband acoustic scattering of growing sea ice and oil beneath sea ice. *Proceedings of Meetings on Acoustics*. Providence, RI. May 5-9, 2014.

C.6 **Bassett, C.**, B. Polagye, and J. Thomson, and K. Rhinefrank. Underwater noise measurements of a $1/7^{\text{th}}$ scale wave energy converter. *MTS/IEEE Oceans*, Kona, HI. September 18-22, 2011.

C.7 **Bassett, C.**, J. Thomson, and B. Polagye. Characteristics of underwater ambient noise at a proposed tidal energy site in Puget Sound. *MTS/IEEE Oceans*, Seattle, WA. September 21-23, 2010.

Other Reports and Articles

T.1 **Bassett, C.**, A. De Robertis, and M. Gallagher (2024). A passive acoustic drifter for radiated noise measurements of NOAA Fisheries Survey Vessels. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-AFSC-490, 116 p.

T.2 **Bassett, C.**, J. Burnett, K. Van Ness, H. Wood, J. Dosher, B. Cunningham, J. Noe, and T. Tran, *APL's Field-Scale Axial Flow Turbine: Design and Specifications* (2024). Technical Report, APL-UW TR 2402. Applied Physics Laboratory, University of Washington, Seattle, September 2024, 29 pp.

T.3 J. Haxel, K. Raghukumar, B. Polagye, **C. Bassett** (2023). Listening to the beat of new ocean technologies for harvesting marine energy. *Acoustics Today*, 4(19), 23-31.

T.4 **Bassett, C.** and K. Zeiden, *Calibration and Processing of Nortek Signature 1000 Echosounders* (2023). Technical Report, APL-UW TR 2307. Applied Physics Laboratory, University of Washington, Seattle, December 2023, 40 pp.

T.5 **Bassett, C.**, and B. Polagye, Editors. Connecting to the Ocean's Power: Marine Energy Research at APL-UW. APL-UW TR2301. Applied Physics Laboratory, University of Washington, Seattle. April 2023 35 pp.

T.6 Polagye, B. and **C. Bassett** (2020). Risk to Marine Animals from Underwater Noise Generated by Marine Renewable Energy Devices. In A.E. Copping and L.G. Hemery (Eds.), OES-Environmental 2020 State of the Science Report: Environmental Effects of Marine Renewable Energy Development Around the World. Report for Ocean Energy Systems (OES). (pp. 67-85).

T.7 W.S. Pegau, J. Garron, L. Zabilansky, **C. Bassett**, J. Bello, J. Bradford, R. Carns, Z. Courville, H. Eicken, B. Elder, P. Eriksen, A. Lavery, B. Light, T. Maksym, H.P. Marshall, M. Oggier, D. Perovich, P. Pocwiardowski, H. Singh, D. Tang, C. Wiggins, and J. Wilkinson (2016). Detection of oil on-in-and-under ice. Technical Report to Joint Industry Programme on oil spill detection and mapping in low visibility and ice: Experimental results.

T.8 Maksym, T., H. Singh, **C. Bassett**, A. Lavery, L. Freitag, and F. Sonnichse (2014). Oil spill detection and mapping under arctic sea ice using autonomous underwater vehicles. BSEE Contract E12PC00053.

T.9 Cagua, E.F., **C. Bassett**, R. Kayanda, J. Rubens, and H. Machano (2014). Acoustic Monitoring of Blast Fishing: Pilot Study - Dar es Salaam. Report CN 94 to WWF Tanzania Country Office: Marine Programme.

Conference Abstracts

A.1 Lefauve, A., **C. Bassett**, D.S. Plotnick, and, and W.R. Geyer. The structure of stratified mixing by shear instability in baroclinically forced shear flows. *European Geosciences Union (EGU) meeting*, Vienna, France, Apr. 27–May 2, 2025.

A.2 Cotter, C., K. Raghukumar, J. Haxel, B. Polagye, and **C. Bassett**. Directional acoustic measurements of a small-scale tidal turbine. *Meeting of the Acoustical Society of America*, New Orleans, LA, May 18-23, 2025.

A.3 **C. Bassett**, P. Gibbs, H. Wood, B. Cunningham, J. Dosher, J. Joslin, B. Polagye, and R. Cavagnaro. A post-deployment engineering assessment of a small-scale tidal turbine. *UMERC/METS 2024*, Duluth, Minnesota, Aug. 7–9, 2024.

A.4 Jones, L., C. Crisp, G. Calandra, K. Sellers Reynolds, **Bassett, C.**, and B. Polagye. Influence of powertrain components on noise from a pair of cross-flow turbines. *UMERC/METS 2024*, Duluth, Minnesota, Aug. 7–9, 2024.

A.5 Van Ness, K., **C. Bassett**, B. Polagye, J. Burnett, J. Dosher, and R. Barber. Field-testing of a variable-pitch, axial-flow marine current turbine with passive adaptive blades. *UMERC/METS 2024*, Duluth, Minnesota, Aug. 7–9, 2024.

A.6 Wood, J., B. Polagye, G. Calandra, H. Wood, **C. Bassett**, O. Williams. Effects of a support structure on cross-flow turbine performance. *UMERC/METS 2024*, Duluth, Minnesota, Aug. 7–9, 2024.

A.7 Levine, R., A. De Robertis, and **C. Bassett**. Comparable estimates of volume scattering from narrowband and broadband echosounder signals. *ICES WGFAST*, Brest, France, Apr. 8–12, 2024.

A.8 **C. Bassett**, J. Joslin, E. DeWitt Cotter, P. Murphy, A. Runyan, and B. Polagye. Near-field monitoring of a small-scale tidal turbine using the Adaptable Monitoring Package (AMP). *Environmental Interactions of Marine Renewables*, Kirkwall, Scotland, Apr. 15–19, 2024.

A.9 Polagye, B., L. Jones, K. Sellers Reynolds, C. Crisp, G. Calandra, and **C. Bassett**. Radiated noise from current turbines: What acoustic frequencies are present and why? *Environmental Interactions of Marine Renewables*, Kirkwall, Scotland, Apr. 15–19, 2024.

A.10 Kahn, R.E., A.C. Lavery, **C. Bassett**, and B. Pettit. Broadband attenuation-based measurements of bubble size distributions. *Meeting of the Acoustical Society of America*, Chicago, IL, Dec. 8-12, 2023.

A.11 Jurisa, J., R. Geyer, D. Ralston, D. Honegger, and **C. Bassett**. The role of vertical advection and mixing in estuarine frontogenesis. *AGU Fall Meeting*, Chicago, IL, Dec. 12-16, 2022.

A.12 R. Geyer, D. Ralston, D. Honegger, and **C. Bassett**. Structure and dynamics of estuarine surface fronts: a comparative study. *AGU Fall Meeting*, Chicago, IL, Dec. 12-16, 2022.

A.13 (*Invited*) Lavery, A.C., **C. Bassett**, and S. Lorganger. How prevelant is scattering from physical microstructure? *Meeting of the Acoustical Society of America*, Nashville, TN, Dec. 5-9, 2022.

A.14 **Bassett, C.**. Operation of a tidal turbine on a moored vessel in Agate Pass, WA. *UMERC/METS*, Portland, OR, September 13-14, 2022.

A.15 Jones, L., C. Crisp, J. Haxel, B. Polagye, and **Bassett, C.**. Drifting acoustic measurements of tidal turbine radiated noise in an urban waterway. *UMERC/METS*, Portland, OR, Sept. 13-14, 2022.

A.16 (*Invited*) **Bassett, C.** and A. Lavery. Echosounding in estuaries: Lessons learned from operations and data in four coastal systems *Meeting of the Acoustical Society of America*, Denver, CO, May 23-27, 2022.

A.17 **Urmy, S.** and A. De Robertis, and **C. Bassett**. Automated probabilistic echo solving: A scalable Bayesian inverse approach applied to echo integration. *ICES WGFAST*, Dakar, Senegal, Apr. 25-28, 2022.

A.18 **Bassett, C.** and A. Lavery. Observations of high-frequency acoustic attenuation due to bubble entrainment at estuarine fronts. *Meeting of the Acoustical Society of America*, Seattle, WA, Nov. 29 - Dec. 3, 2021.

A.19 Lavery, A.C., **C. Bassett**, and B. Petitt. Remote and Autonomous Platforms for Measuring Broadband Backscatter. *Meeting of the Acoustical Society of America*, Seattle, WA, Nov. 29 - Dec. 3, 2021.

A.20 E. Cotter, **C. Bassett**, and A. Lavery. Target density comparisons between shipboard and in situ echosounders. *ICES Annual Science Conference*, Copenhagen, Denmark, 6–9 Sept., 2021.

A.21 Jech, M., E. Cotter, **C. Bassett**, and A. Lavery. Exploring the Mesopelagic Zone Using DeepSee. *ICES Annual Science Conference*, Copenhagen, Denmark, 6–9 Sept., 2021.

A.22 Polagye, B., C. Crisp, P. Murphy, J. Noe, and **C. Bassett**. Identification and reduction of low-frequency self-noise and flow-noise in a drifting acoustic measurement system. *International Conference on Ocean Energy*, Virtual, 28–30 Apr. 2021.

A.23 Joslin, J., P. Gibbs, M. Scott, **C. Bassett**, P. Murphy, and B. Polagye. Development and demonstration of the Adaptable Monitoring Package. *International Conference on Ocean Energy*, Virtual, 28–30 Apr., 2021.

A.24 Reeder, D.B., **C. Bassett**, M.C. Haller, D. Honegger, J. Joseph, and T.A. Rago. Acoustic characterization of the James River Estuary. *AGU Ocean Sciences Meeting*, San Diego, CA, 16–21 Feb., 2020.

A.25 **Bassett, C.**, A.C. Lavery, W.R. Geyer, and J. Thomson. Acoustic Observations of Bubble Plumes at a Tidal Intrusion Front in the James River Estuary. *AGU Ocean Sciences Meeting*, San Diego, CA, 16–21 Feb., 2020.

A.26 Geyer, W.R., A.C. Lavery, J.T. Jurisa, D.K. Ralston, M.E. Scully, D. Honegger and **C. Bassett** Dynamics of Tidal Intrusion Fronts *AGU Ocean Sciences Meeting*, San Diego, CA, 16–21 Feb., 2020.

A.27 Jurisa, J.T., W.R. Geyer, D.K. Ralston, A.C. Lavery, **C. Bassett**, and D. Honegger. Variability of turbulence in a tidal intrusion front. *AGU Ocean Sciences Meeting*, San Diego, CA, 16–21 Feb., 2020.

A.28 Cotter, E., **C. Bassett**, and B. Polagye. Target Detection and Classification Capabilities of Two Multibeam Sonars. *AGU Ocean Sciences Meeting*, San Diego, CA, 16–21 Feb., 2020.

A.29 (*Invited*) **Bassett, C.**, A. Lavery, and, T. Stanton. Broadband measurements of the acoustic target strength of mesopelagic fishes. *Meeting of the Acoustical Society of America*, San Diego, CA, 2–6 Dec., 2019.

A.30 Deemer, G., T. Lyons, **C. Bassett**, and R. Levine. Characterizing the high-frequency acoustic response from sea ice over one season of natural environmental forcing in the Chukchi Sea. UACE 2019, Hersonissos, Greece, 30 June–5 July, 2019.

A.31 De Robertis, A., **C. Bassett**, L. Nonboe Andersen, I. Wangen, S. Furnish, and M. Levine. A comparison of echo-integration measurements from two echosounders widely used in acoustic-trawl surveys. *ICES WGFAST*, Galway, Ireland, 29 Apr.–2 May, 2019.

A.32 De Robertis, A., **C. Bassett**, and S. Furnish. Using EK80 echosounders in narrowband mode: Does $\mathrm{S_{v,EK80}} = \mathrm{S_{v,EK80}}$? *ICES WGFAST*, Seattle, WA, 20–23 Mar. 2018.

A.33 Chu, D. and **C. Bassett**. Characterization of backscattering by walleye pollock. *ICES WG-FAST*, Seattle, WA, 20–23 Mar., 2018.

A.34 Loranger, S. J.P. Cole, **C. Bassett**, and T. Weber. The acoustic properties of three crude oils at oceanographically relevant temperatures and pressures. *Meeting of the Acoustical Society of America*, New Orleans, LA, 4–8 Dec., 2017.

A.35 Loranger, S. **C. Bassett**, and T. Weber. Measurements of the acoustic properties of crude oil. *Meeting of the Acoustical Society of America*, Honolulu, HI, 27 Nov. – 2 Dec., 2016.

A.36 **Bassett, C.**, T. Weber, C. Wilson, and A. De Robertis. Potenial for broadband acoustics to improve stock assessment surveys of midwater fishes. *Meeting of the Acoustical Society of America*, Honolulu, HI, 27 Nov.-2 Dec., 2016.

A.37 **Bassett, C.**, C. Wilson, and A. De Robertis. Species discrimination using wideband acoustic backscattering measurements from a basin-wide acoustic-trawl survey of the Gulf of Alaska. *ICES WGFAST*, Vigo, Spain, Apr. 19-22, 2016.

A.38 **Bassett, C.**, A.C. Lavery, T. Maksym, J. Wilkinson, and D. Tang. Development of Remote Sensing Techniques for Sea Ice, Oil under Sea Ice, and Oil Encapsulated in Sea Ice. *Meeting of the Acoustical Society of America*, Jacksonville, FL, Nov. 2-6, 2015.

A.39 **Bassett, C.** and A.C. Lavery. Laboratory Measurements of High-Frequency Broadband Acoustic Backscatter from Sea Ice, Oil under Sea Ice, and Oil Encapsulated in Sea Ice. *Meeting of the Acoustical Society of America*, Jacksonville, FL, Nov. 2-6, 2015.

A.40 Tang, D., D. R. Jackson, **C. Bassett**, and A.C. Lavery. Modeling High-Frequency Acoustic Backscatter for Remote Sensing of Oil under Sea Ice and Oil Encapsulated in Sea Ice. *Meeting of the Acoustical Society of America*, Jacksonville, FL, Nov. 2-6, 2015.

A.41 **Bassett, C.**, A.C. Lavery, T. C. Weber, G. Lawson, M. Jech, G. Macaulay, R. Korneliussen, and E. Ona. Application of broadband echosounders for detection and characterization of targets near boundaries. *ICES Symposium on Marine Ecosystem Acoustics*, Nantes, France, 25–28 May, 2015.

A.42 Jech, M., A.C. Lavery, G. Lawson, and **C. Bassett**. Acoustic observations of fish and zooplankton over a wide frequency band (15-400 kHz). *ICES Symposium on Marine Ecosystem Acoustics*, Nantes, France, 25–28 May, 2015.

A.43 **Bassett, C.**, A.C. Lavery, and T. Maksym. Laboratory measurements of high-frequency, broadband acoustic scattering of growing sea ice and oil beneath sea ice. *Meeting of the Acoustical Society of America*, Providence, RI, May 5-9, 2014.

A.44 **Bassett, C.**, J. Thomson, B. Polagye, and J. Wood. Shifting gravel and the acoustic detection range of killer whales. *American Geophysical Union Fall Meeting*, San Francisco, CA, 3–7 Dec., 2012.

A.45 **Bassett, C.**, J. Thomson, and B. Polagye. Course-grained sediment mobilization as a source of ambient noise. *AGU Ocean Sciences Meeting*. Salt Lake City, UT, 20–24 Feb., 2012.

A.46 **Bassett, C.**, B. Polagye, and J. Thomson, and K. Rhinefrank. Underwater noise measurements of a $1/7^{\text{th}}$ scale wave energy converter. *MTS/IEEE Oceans*, Kona, HI, 18–22 Sept., 2011.

A.47 **Bassett, C.**, B. Polagye. and J. Thomson. Approaches to ambient noise characterization at tidal energy sites. *Meeting of the American Fisheries Society*, Seattle, WA, 23–27 Sept., 2011.

A.48 **Bassett, C.**, J. Thomson, and B. Polagye. Estimating the acoustic impact of a tidal energy project, *Meeting of the Acoustical Society of America*, Seattle, WA, 23–27 May, 2011.

A.49 Polagye, B., J. Wood, **C. Bassett**, D. Tollit, and J. Thomson, Behavioral response of harbor porpoises to vessel noise in a tidal strait, *Meeting of the Acoustical Society of America*, Seattle, WA, 23–27 May, 2011.

A.50 (*Invited*) Polagye, B., J. Thomson, **C. Bassett**, and J. Epler. Comprehensive characterization of a tidal energy site. *American Geophysical Union Fall Meeting*. San Francisco, CA, 13–17 Dec. 13-17, 2010.

A.51 (*Invited*) **Bassett, C.**, B. Polagye, and J. Thomson. Passive acoustics. *Renewable Ocean Energy and the Marine Environment*. Palm Beach Gardens, FL, 4–6 Nov., 2010.

Other Presentations

P.1 **Bassett, C.**. Reflections on the Turbine Lander deployment in Sequim Bay, WA (and future work). PMEC All-Center Meeting, Oregon State University, September 2024.

P.2 **Bassett, C.**. Calibration and Processing of Nortek Signature1000 Echosounders? Nortek Days, May 2024.

P.3 **Bassett, C.**. The Turbine Lander: What is it, what happened, and was it fun? Applied Physics Laboratory Seminar Series, May 2024.

P.4 (*Invited*) **Bassett, C.**. Marine Energy Research and Development for a Sustainable Future. Ocean Research and its Application for a Sustainable Society, 2nd KULOS Symposium, November 2022.

P.5 Polagye, B. and **C. Bassett**. Risk to Marine Animals from Underwater Noise Generated by Marine Renewable Energy Devices. Presentation/webinar for the release of the OES-Environmental 2020 State of the Science Report: Environmental Effects of Marine Renewable Energy Development Around the World, June 2020.

P.6 **Bassett, C.** and E. Cotter. Broadband acoustic backscattering measurements in the mesopelagic zone: What information is missed by traditional sampling approaches? *Alaska Fisheries Science Center Seminar Series*, Seattle, WA. March 2020.

P.7 Cotter, C. and **Bassett, C.** The Adaptable Monitoring Package. *AGU Ocean Sciences 2020, Supporting Marine Renewable Energy Development through Multi-Scale Testing Town Hall*, San Diego, CA. February 2020.

P.8 **Bassett, C.** Applications of high-frequency acoustic backscatter from the surface to the mesopegalic zone. *Applied Physics Lab. Acoustics Seminar* Seattle, WA. October 2019.

P.9 **Bassett, C.** and A. De Robertis. So what's the deal with these fancy new echosounders? *Alaska Fisheries Science Center Seminar Series*, Seattle, WA. March 2019.

P.10 **Bassett, C.** What are broadband echosounders and can they be used to improve AFSC acoustic-trawl surveys? *Alaska Fisheries Science Center Seminar Series*, Seattle, WA. May 2018.

P.11 **Bassett, C.** Passive and Active Acoustic Techniques for Measuring, Modeling, and Mitigating Anthropogenic Impacts in Ocean Environments. *University of New Hampshire, Department of Mechanical Engineering Seminar.* Durham, NH. May 2015.

P.12 **Bassett, C.** and Polagye, B. Underwater Sound from MHK Converters. *MHK Regulator Workshop.* Washington DC. May 2015.

P.13 **Bassett, C**. Active and Passive Acoustic Techniques for Measuring, Modeling, and Mitigating Anthropogenic Impacts in Ocean Environments. *Woods Hole Oceanographic Institution, Department of Applied Ocean Physics and Engineering Seminar.* Woods Hole, MA. March 2015.

P.14 Polagye, B. and **C. Bassett** (joint presentation). Underwater Sound from Marine Hydrokinetic Converters: Primer and Synthesis. *DOE Marine and Hydrokinetic Workshop for State and Federal Regulators.* Portland, OR. September 2014.

P.15 **Bassett, C.** Sediment-generated noise. *Coastal & Ocean Fluid Dynamics Laboratory Seminar, Woods Hole Oceanographic Institution*. Woods Hole, MA. January 2014.

P.16 **Bassett, C.** Ambient Noise in an Urbanized Tidal Channel. *Departmental Seminar, Applied Physics Lab., Univ. of Washington.* Seattle, WA. July 2014.

P.17 Polagye, B. and **C. Bassett** (joint presentation). Underwater Sound: Tidal Turbines and Marine Mammals. *Marine Renewables Seminar, Mechanical Engineering, Univ. of Washington* Seattle, WA. September 2013.

P.18 **Bassett, C.** Sediment-Generated Noise in a Tidal Channel. *Departmental Seminar, Applied Physics Lab., Univ. of Washington.* Seattle, WA. October 2012.

P.19 **Bassett, C.**, J. Thomson, and B. Polagye. Characterizing a Tidal Energy Site. *Departmental Seminar, Civil Engineering, Univ. Catolica de Chile.* Santiago, Chile. August 2013.

P.20 **Bassett, C.**, J. Thomson, B. Polagye, and K. Rhinefrank. Underwater noise measurements of a $1/7^{\text{th}}$ scale wave energy converter. *DOE MHK Environmental Webinar Series*. December 2011.

P.21 Polagye, B. and **C. Bassett** (joint presentation). Ambient and Turbine Noise. *Northwest Fisheries Science Center*. Seattle, WA. April 2011.

P.22 (*Invited*) **Bassett, C.**, B. Polagye and, J. Thomson. Passive acoustic monitoring for tidal energy projects. *Advanced Marine Renewable Energy Instrumentation Experts Workshop*, Broomfield, CO, April 2011.

Teaching

Mechanical Engineering ME525 - Applied Acoustics
Mechanical Engineering ME598 - Graduate Projects (independent study)

Honors and Recognition

APL Science and Engineering Achievement Award (2023)
Technical Area Pick in Acoustical Oceanography, *J. Acoust. Soc. Am.* (2020)
Woods Hole Oceanographic Institution Postdoctoral Scholar Fellowship (2013)
University of Washington Graduate School Medal (2013)
National Science Foundation Graduate Research Fellowship (2010)

Workshops and Courses Attended

ICES/CIEM - Principles and Methods of Broadband/Wideband Technologies (2016)
Joint U.S.-Norway EK80 Workshop, San Diego, CA (2016)
Acoustical Society of America - ASA School (2014)
University of Washington, Friday Harbor Labs “Marine Bioacoustics” course (2011)

Professional Activities

Journal Peer Reviews

Cold Regions Science and Technology, *European Wave and Tidal Energy Conference*, *Geophysical Research Letters*, *ICES Journal of Marine Science*, *Journal of Marine Science and Engineering*, *IEEE Journal of Oceanic Engineering*, *Journal of the Acoustical Society of America*, *Journal of Atmospheric and Oceanic Technology*, *Journal of Geophysical Research - Oceans*, *Limnology and Oceanography: Methods*, *Marine Pollution Bulletin*, *Progress in Oceanography*, *The Cryosphere*, and others

Technical Board Board Member - TEAMER

Technical board member for Testing & Expertise for Marine Energy (2025 – pres.)

Convener - IEC TC 114 PT 62600-40

Technical committee to establish a standardized approach for measuring, analyzing, and reporting the sound produced by marine renewable energy devices (2022 – pres.)

Associate Director

Pacific Marine Energy Center (2022 – 2024)

U.S. Shadow Committee Chair - IEC TC 114 PT 62600-40

IEC TC 114 PT 62600-40 (2015 – 2022)

Associate Editor - Acoustical Oceanography

Proceedings of Meetings on Acoustics, Acoust. Soc. Am. (2020 – 2023)

Acoustical Oceanography Technical Program Organizer

Acoustical Society of America Meetings (2022 – 2025)

Acoustical Oceanography Technical Committee Member

Acoustical Society of America (2014 – pres.)

Seminars and Conference Sessions

- Session Co-chair, "Acoustical Sensing of Ocean Turbulence, Mixing, and Stratification" 183rd Meeting Acoustical Society of America, Nashville, TN (2022) - Session Co-chair, "Topics in Acoustical Oceanography" 182st Meeting Acoustical Society of America, Denver, CO (2022)

- Session Co-chair, "New Data Sources and Processing Techniques in Fisheries Acoustics: Revolutionary or Incremental Progress?" 181st Meeting Acoustical Society of America, Seattle, WA (2021)

- Session Co-chair, "Beyond Just Discovery in the Ocean's Midwater: Novel and Mechanistic Approaches to Understanding Mesopelagic and Bathypelagic Ecosystems" AGU Ocean Sciences, San Diego, CA (2020)

- Co-organizer. Alaska Fisheries Science Center Seminar Series (2018)

- Session Co-chair, "Acoustic Scattering from Hydrocarbons and Hydrothermal Vents," Meeting of the Acoustical Society of America, New Orleans, LA (2017)

Student Paper Judge

- 181^{th} Meeting of the Acoustical Society of America, Seattle, WA (2021)
- 179^{th} Meeting of the Acoustical Society of America, Virtual (2020)
- 170^{th} Meeting of the Acoustical Society of America, Jacksonville, FL (2015)
- 167^{th} Meeting of the Acoustical Society of America, Providence, RI (2014)

Program and Funding Reviews

- TEAMER: Testing Expertise and Access for Marine Energy Research
- DOE Water Power Technology Office Program Peer Review
- NOAA Office of Ocean Exploration and Research
- UW Royalty Research Fund
- Environmental Stewardship for Renewable Energy Technologies: MHK Environmental and Resource Characterization Instrumentation
- Instrumentation for Monitoring Around Marine Renewable Energy Devices (DOE)

APL Early-Career Principal Investigator

APL Interest Group Co-organizer (2021-2022)

Mentorship and Committees

Miad Al Mursaline (Postdoc, 2025)
Lucy Gracy Kao and Jood Almokharrak (Undergraduate; 2024–2025)
Sunil McMillen (Undergraduate; DINOSIP internship, 2024)
Kate Van Ness (Postdoc, 2024–pres)
Lindsey Jones (MS student, 2021–2024)
MS in Data Science Capstone Project Mentor (2023–2024)
Sunil McMillen (Undergraduate; Doris Duke Conservation Scholars Program, 2023)
Lily Nguyen (MS student, 2021–2024)
Curtis Rusch (Postdoc, 2021–2023)
Rachel Kahn (MIT/WHOI Joint Program; committee member, 2021–2024)
Robert Levine (Postdoc, 2022)

Professional Affiliations

Acoustical Society of America
American Geophysical Union
American National Standards Institute

Outreach

Presenter: American Association of Physics Teachers - Ohio section (2024)
Presenter: UW College of Engineering Discovery Days (2010-2013, 2024)
Volunteer: Science Storytellers Interviewee (2020)
Volunteer: NOAA Open House (2017)
Invited Speaker:
- American Cetacean Society Speaker Series, Puget Sound Chapter (2013)
- Emerald Sea Diving Club (2013)
- Marker Buoy Dive Club (2013)

Exhibitor: Seattle Science EXPO (2012-2013)
Presenter: UW College of Engineering Discovery Days (2010-2013)
Volunteer: National Ocean Science Bowl - Orca Bowl (2012)
Guest Instructor: Robinson Center Summer Challenge (2013)
Volunteer/Instructor: Ocean Inquiry Project (2010-2011)
Exhibit Design/Exhibitor: Windustry at the Minnesota State Fair (2008)
Organizer/Instructor: Building Resources and Innovative Designs for Global Energy (BRIDGE); student organization at the University of Minnesota (2007-2008)
Assistant Director/Tutor: Santo Rosario Grupo de Jovenes, Minneapolis, MN (2005)