

Andrew M.P. McDonnell, Ph.D.

Associate Professor of Oceanography
 University of Alaska Fairbanks
 College of Fisheries and Ocean Sciences
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EDUCATION

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| 2011 | Doctor of Philosophy, Chemical Oceanography, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution (MIT/WHOI) Joint Program in Oceanography |
| 2005 | Bachelor of Science, Chemical Engineering, University of California, Los Angeles (UCLA) |

PROFESSIONAL EXPERIENCE

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| 2018-present | Associate Professor, University of Alaska Fairbanks, College of Fisheries and Ocean Sciences |
| 2012-2018 | Assistant Professor, University of Alaska Fairbanks, College of Fisheries and Ocean Sciences |
| 2011-2012 | Postdoctoral Scholar, Swiss Federal Institute of Technology (ETH) Zürich, Switzerland, Prof. Nicolas Gruber |
| 2005-2011 | Graduate Research Assistant, Woods Hole Oceanographic Institution, Dr. Ken Buesseler |
| 2005 | Alkalinity Technician, University of California, San Diego, Prof. Andrew Dickson |
| 2004-2005 | Undergraduate Research Assistant, UCLA, Prof. Nicolas Gruber |

PUBLICATIONS (15 Published, 1 Submitted, student authors underlined>

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- Hauri, C., Danielson, S., **McDonnell, A.M.P.**, Hopcroft, R.R., Winsor, P., Shipton, P., Lalande, C., Stafford, K.M., Horne, J.K., Cooper, L.W., Grebmeier, J.M., Mahoney, A., Maisch, K., McCammon, M., Statscewich, H., Sybrandy, A., and Weingartner, T., From sea ice to seals: A moored marine ecosystem observatory in the Arctic, *Ocean Science Discussion*, doi:10.5194/os-2018-82.
- Cram, J.A., Weber, T., Leung, S.W., **McDonnell, A.M.P.**, Liang, J.-H., Deutsch, C. The role of particle size, ballast, temperature, and oxygen in the sinking flux to the deep sea. *Global Biogeochemical Cycles*, 32. doi:10.1029/2017GB005710
- R. Kiko, A. Biastoch, P. Brandt, S. Cravatte, H. Hauss, R. Hummels, I. Kriest, F. Marin, **A.M.P. McDonnell**, A. Oschlies, M. Picheral, F. U. Schwarzkopf, A. M. Thurnherr, L. Stemmann (2017) Biological and physical influences on marine snowfall at the equator. *Nature Geosciences*, 10, 852- doi:10.1038/ngeo3042
- Turner, J.S., Pretty, J.L., **McDonnell, A.M.P.** (2017) Marine particles in the Gulf of Alaska shelf system: spatial patterns and size distributions from in situ optics. *Continental Shelf Research*, 145, 13-20, doi/10.1016/j.csr/2017.07.002
- Burd, A.B., A. Buchan, M. Church, M. Landry, **A.M.P. McDonnell**, U. Passow, D. Steinberg, H. Benway. (2016) Towards a transformative understanding of the biology of the ocean's biological pump: Priorities for future research. Report of the NSF Biology of the Biological Pump Workshop, February 19–20, 2016 (Hyatt Place New Orleans, New Orleans, LA), 63 pp. DOI:10.1575/1912/8263.

- Boyd, P.W., **McDonnell, A.M.P.**, Valdes, J., LeFevre, D., Gall, M.P. (2015) RESPIRE: an in situ particle interceptor to conduct particle remineralization and microbial dynamics studies in the oceans' Twilight Zone. *Limnology and Oceanography: Methods*. doi: 10.1002/lom3.10043.
- McDonnell, A.M.P.**, Lam, P.J., Lamborg, C.H., Buesseler, K.O., Sanders, R., Riley, J.S., Marsay, C., Smith, H.E.K., Sargent, E.C., Lampitt, R.S., Bishop, J.K.B. (2015) The oceanographic toolbox for the collection of sinking and suspended marine particles, *Progress in Oceanography*, doi:10.1016/j.pocean.2015.01.007.
- McDonnell, A.M.P.**, Boyd, P.W., Buesseler, K.O. (2015) Effects of sinking velocities and microbial respiration rates on the attenuation of particulate carbon fluxes through the mesopelagic zone, *Global Biogeochemical Cycles*, 28, doi:10.1002/2014GB004935.
- Hauri, C., Winsor, P., Juranek, L., **McDonnell, A.M.P.**, Takahashi, T., Mathis, J.T. (2013) Wind-driven mixing causes a reduction in the strength of the continental shelf carbon pump in the Chukchi Sea, *Geophysical Research Letters*, 40, 5932–5936, doi:10.1002/2013GL058267.
- Hauri, C., Gruber, N., **McDonnell, A.M.P.**, Vogt, M. (2013) The intensity, duration, and severity of low aragonite saturation state events on the California continental shelf, *Geophysical Research Letters*, 40, 3424–3428.
- Hauri, C., Gruber, N., Vogt, M., Doney, S.C., Feely, R.A., Lachkar, Z., Leinweber, A., **McDonnell, A.M.P.**, Munnich, M., Plattner, G.-K. (2013) Spatiotemporal variability and long-term trends of ocean acidification in the California Current System, *Biogeosciences*, 10, 193-216.
- McDonnell, A.M.P.**, Buesseler, K.O. (2012) A new method for the estimation of sinking particle fluxes from measurements of the particle size distribution, average sinking velocity, and carbon content. *Limnology and Oceanography: Methods*, 10, 329-346.
- Buesseler, K.O., **McDonnell, A.M.P.**, Schofield, O.M., Steinberg, D.K., Ducklow, H.W. (2010) High particle export over the continental shelf of the west Antarctic Peninsula. *Geophysical Research Letters*, 37, L22606, doi:10.1029/2010GL045448.
- McDonnell, A.M.P.**, Buesseler, K.O. (2010) Variability in the average sinking velocity of marine particles. *Limnology and Oceanography*, 55 (5), 2085-2096.
- Beving, D.E., **McDonnell, A.M.P.**, Yang, W., Yan, Y. (2006) Corrosion resistant high-silica-zeolite MFI coating. *Journal of the Electrochemical Society*, 153 (8), 325-329.
- McDonnell, A.M.P.**, Beving, D., Wang, A., Chen, W., Yan, Y. (2005) Hydrophilic and antimicrobial zeolite coatings for gravity-independent water separation. *Advanced Functional Materials*, 15, 336-340.

CONFERENCE and WORKSHOP PRESENTATIONS (Student authors underlined)

- Pretty, J., Turner, J.S., Picheral, M., **McDonnell, A.M.P.** (2018) Linkages between zooplankton and marine particle distributions across a latitudinal transect of the Pacific Ocean. Abstract ME43A-08, 2018 2018 Ocean Sciences Meeting.
- R. Kiko, A. Biastoch, P. Brandt, S. Cravatte, H. Hauss, R. Hummels, I. Kriest, F. Marin, **A.M.P. McDonnell**, A. Oschlies, M. Picheral, F. U. Schwarzkopf, A. M. Thurnherr, L. Stemmann (2018) Biological and physical influences on marine snowfall at the equator. Abstract ME44A-0982, 2018 Ocean Sciences Meeting.
- Stemmann, L., Lombard, F., Guidi, L., Coppola, L., Irisson, J., Picheral, M., Lafond, A., Waite, A., Biard, T., Boss, E., Karp-Boss, L., Hauss, H., **McDonnell, A.M.P.**, Babin, M., Ohman, M., Kiko, R., Gorsky, G., (2018), Global in situ imaging of large plankton and particles by the Underwater Vision Profiler in the upper kilometer of all oceans, Abstract BN21B-01, 2018 Ocean Sciences Meeting.

- Lekanoff, R., Collins, R.E., **McDonnell, A.M.P.**, (2018) Characterizing gene functions of particle-associated microbes and their role in the carbon cycle of the Bering and Chukchi Seas, Abstract BN24D-1112, 2018 Ocean Sciences Meeting.
- O'Daly, S., **McDonnell, A.M.P.**, (2018) Determining particle density, composition, and flux in the North Bering and South Chukchi seas during and earlier spring melt. 2018 Alaska Marine Science Symposium.
- Lekanoff, R., Collins, R.E., **McDonnell, A.M.P.**, (2018) Characterizing gene functions of particle-associated microbes and their role in the carbon cycle of the Bering and Chukchi Seas, 2018 Alaska Marine Science Symposium
- Danielson, S.L., Iken, K., Hauri, C., Hopcroft, R.R., **McDonnell, A.M.P.**, Winsor, P., Grebmeier, J.M., Lalande., C., Cooper, L.W., Horne, J.K., Stafford, K., (2017) Collaborative approaches to multi-disciplinary monitoring of the Chukchi shelf marine ecosystem: Networks of networks for maintaining long-term Arctic observations, MTS-IEEE Oceans 17, Anchorage. (Conference Paper and Presentation)
- Pretty, J.L., **McDonnell, A.M.P.**, (2017) Investigating the relationship between zooplankton and particle penetration. 2017 Alaska Marine Science Symposium.
- Lekanoff, R., Pretty, J., **McDonnell, A.M.P.** (2017) Optical instrumentation and image analysis as a means of studying particle types in the Chukchi Borderlands. 2017 Alaska Marine Science Symposium.
- McDonnell, A.M.P.**, Turner, J.S. (2016) Large particle distributions and processes across the P16N transect, US GEOTRACES Pacific Meridional Transect Planning Meeting. (Invited Plenary Talk)
- McDonnell, A.M.P.**, (2016) Constraining the full spatial and temporal scales of variability in the ocean's biological carbon pump: From episodic events to global patterns. 2016 Ocean Carbon Biogeochemistry Workshop, Woods Hole, MA. (Invited Talk)
- McDonnell, A.M.P.**, Turner, J.S. (2016) Large-scale patterns and drivers of the biological carbon pump: Insights from in situ camera observations across the Pacific Ocean, 2016 Ocean Sciences Meeting.
- Janzen, C., Danielson, S.L., Winsor, P., McCammon, M., Hauri, C., Hopcroft, R.R., Lalande., C., **McDonnell, A.M.P.**, Stafford, K. (2016) What's going on up there? The Chukchi Sea Ecosystem Mooring, 2016 Ocean Sciences Meeting.
- Turner, J.S., Pretty, J.L., **McDonnell, A.M.P.** (2016) Processes determining the spatial distribution of optically-imaged particles in the Gulf of Alaska, 2016 Ocean Sciences Meeting.
- McDonnell, A.M.P.** (2016), New Instrumentation for the Study of the Biological Carbon Pump. Biology of the Biological Pump Workshop (Invited Plenary Talk).
- Hauri, C., **McDonnell, A.M.P.**, Winsor, P., Statscewich, H., (2016) Development of an autonomous carbon glider to monitor sea-air CO₂ fluxes in the Chukchi Sea. 2016 Alaska Coastal Marine Institute Annual Studies Review.
- Danielson, S.L., Hauri, C., Hopcroft, R.R., Lalande., C., **McDonnell, A.M.P.**, Stafford, K. (2016), Northeastern Chukchi Shelf Ecosystem Observatory: Year 1 Results and Year 2 Build-out, 2016 Alaska Marine Science Symposium, Anchorage.
- Pretty, J.L., **McDonnell, A.M.P.** (2016) Using Optical Instruments to Describe Particle Size Distribution and Abundance on the Gulf of Alaska Shelf, 2016 Alaska Marine Science Symposium, Anchorage
- McDonnell, A.M.P.** (2015) How might climate change alter the transfer efficiency of sinking particle fluxes on the polar shelves? 2015 Gordon Research Conference: Polar Marine Science, Lucca, Italy.

- Turner, J.S., McDonnell, A.M.P. (2015) Evaluating particle abundances and size distributions with chlorophyll *a* concentrations in the northern coastal Gulf of Alaska, 2015 Alaska Marine Science Symposium.
- Gordon, T.E., Turner, J.S., McDonnell, A.M.P. (2015) Particle size distributions over the Alaskan Beaufort Shelf and Slope: Insights into the sources, transport, and vertical fluxes of particulate matter, 2015 Alaska Marine Science Symposium.
- Turner, J.S., McDonnell, A.M.P. (2014) Evaluating particle abundances and chlorophyll *a* concentrations in the coastal northern Gulf of Alaska, 2014 Ocean Carbon Biogeochemistry Workshop.
- McDonnell, A.M.P.**, Boyd, P.W., Buesseler, K.O. (2014) Sinking velocities and microbial respiration rates alter the transfer efficiencies of particulate carbon fluxes through the mesopelagic zone, 2014 Ocean Carbon Biogeochemistry Workshop.
- McDonnell, A.M.P.**, Gruber, N. (2014) Spatial and temporal displacement of sinking particle fluxes and remineralization. 2014 Ocean Sciences Meeting, Honolulu. Abstract ID 17552.
- Hauri, C., Winsor, P., Juranek, L., **McDonnell, A.M.P.**, Takahashi, T., Mathis, J.T. (2014) A revised view of the magnitude and drivers of sea-air CO₂ fluxes in the Chukchi Sea, 2014 Alaska Marine Science Symposium.
- Hauri, C., Winsor, P., Juranek, L.W., **McDonnell, A.M.P.**, Takahashi, T., Mathis, J.T. (2013) A revised view of the dynamics of carbon cycling in the Chukchi Sea, Ocean Acidification PI meeting, Washington D.C.
- McDonnell, A.M.P.**, Boyd, P.W., Buesseler, K.O. (2013) The effects of sinking velocities and microbial respiration rates on the attenuation of particle flux through the ocean's twilight zone. 2013 Aquatic Sciences Meeting, New Orleans. Session SS16.
- McDonnell, A.M.P.** (2013) Introducing the Marine Particle Dynamics Laboratory at the University of Alaska Fairbanks. 2013 Alaska Marine Science Symposium.
- McDonnell, A.M.P.**, Buesseler, K.O. (2012) High-resolution mapping of sinking particle fluxes along the western Antarctic Peninsula. 2012. Ocean Sciences Meeting. Abstract ID 10269.
- Hauri, C., Gruber, N., Vogt, M., Doney, S.C., Feely, R.A., Lachkar, Z., Leinweber, A., **McDonnell, A.M.P.**, Munnich, M., Plattner, G.-K. (2012) Transition decades for ocean acidification in the California Current System. 2012 Ocean Sciences Meeting. Abstract ID 11119.
- McDonnell, A.M.P.**, Buesseler, K.O. (2011) Estimation of sinking particle fluxes from local measurements of particle size distributions, sinking velocities, and densities. *3rd GEOTRACES Data-model Synergy Workshop*, Barcelona, Spain, November 2011.
- Buesseler, K.O., **McDonnell, A.M.P.** (2011) Measuring particle fluxes and sinking rates- how can polyacrylamide gel sediment traps help? 3rd GEOTRACES Data-model Synergy Workshop, Barcelona, Spain, November 2011.
- McDonnell, A.M.P.**, Buesseler, K.O. (2010) Sinking Velocity Spectra from Simultaneous Measurements of Particle Flux and Concentration. 2010 Ocean Sciences Meeting. BO23B-02.
- McDonnell, A.M.P.**, Buesseler, K.O., Gallagher, S.M. (2009) Relating Stocks and Sinking Fluxes of Particles in the Mesopelagic Zone: Case Studies from the West Antarctic Peninsula and the Subtropical North Atlantic. AGU Chapman Conference on the Biological Carbon Pump of the Oceans, Brockenhurst, England.
- Leinweber, A., Gruber, N., Shipe, R., Frenzel, H., Friederich, G., Coleman, H., Esther, T., **McDonnell, A.M.P.** (2005) Seasonal carbon cycling in Santa Monica Bay, Southern California. Seventh International Carbon Dioxide Conference.

OTHER SCIENTIFIC PRESENTATIONS

Oceans and Global Change, Session Moderator, Citizens' Climate Lobby International Conference, Washington DC, June 2016
Institute of Marine Science Seminar, University of Alaska, Fairbanks. April 2016
Oceans and Global Change, Citizens' Climate Lobby International Conference, Washington DC, June 2015
Institute of Marine Science Seminar, University of Alaska, Fairbanks. October 2012
Observatoire Océanographique de Villefranche, 2012
Institute of Marine Science Seminar, University of Alaska, Fairbanks, 2011
Environmental Physics, Swiss Federal Institute of Technology, Zurich, 2011
Palmer Long-Term Ecological Research (LTER) Workshop, 2010
Environmental Physics, Swiss Federal Institute of Technology, Zurich, 2009
Marine Chemistry and Geochemistry Departmental Seminar, Woods Hole Oceanographic Institution, 2009

OTHER CONTRIBUTIONS

PhD Thesis:

McDonnell, A.M.P. (2011) Marine particle dynamics: sinking velocities, size distributions, fluxes, and microbial degradation rates. Ph.D. Thesis. Massachusetts Institute of Technology/Woods Hole Oceanographic Institution Joint Program in Oceanography, <http://hdl.handle.net/1721.1/65326>

YouTube Videos (Publically Available):

ASGARD Trailer, YouTube Video, June 2017. https://youtu.be/sQDZo9Fw_hw
Chukchi Ecosystem Observatory, YouTube Video, May 2017. <https://youtu.be/ypmzTuAQ98k>
Mysteries of Southern Ocean, Photographic contributions to YouTube Video produced by Climate Central, Dec. 2015, <https://youtu.be/qA8YzadLgIo>
How to use Twitter as a News Aggregator for Ocean Science. YouTube Video, November 2015, <https://youtu.be/XqNvfuo7uv0>
Rapidly acidifying waters pose major threat for Southern Ocean ecosystem. YouTube Video. <https://www.youtube.com/watch?v=68p9fMBrXIA>

Photography:

Krill Close-up, Woods Hole Oceanographic Institution, Image of the Day, August 22, 2015
Photographic Contribution to Ducklow, H.W., W.R. Fraser, M.P. Meredith, S.E. Stammerjohn, S.C. Doney, D.G. Martinson, S.F. Sailley, O.M. Schofield, D.K. Steinberg, H.J. Venables, and C.D. Amsler. 2013. West Antarctic Peninsula: An ice-dependent coastal marine ecosystem in transition. *Oceanography* 26(3):190–203, doi:10.5670/oceanog.2013.62.
Photographic Contribution to Doney, S.C. and S.F. Sevrine, 2013: When an ecological regime shift is really just stochastic noise, *Proc. Nat. Acad. Sci. USA*, 110(7), 2438-2439, doi:10.1073/pnas.1222736110

Published Opinion Pieces:

McDonnell, A.M.P., and Girard, J.J., Murkowski must lead on renewable energy. Letter to the Editor, *The Daily News Miner*, March 26, 2016.
McDonnell, A.M.P. Alaska delegation should press climate solution that benefits environment and economy. Commentary, *Alaska Dispatch News*, January 2, 2015.

RESEARCH CRUISES AND FIELD WORK

May 31- June 24, 2018	<i>RV Sikuliaq</i> , ASGARD 2018
June 29-July 5, 2017	<i>RV Sikuliaq</i> , Gulf of Alaska Mooring Recovery Operations
June 4-7, 2017	<i>RV Sikuliaq</i> , ASGARD Transit Cruise Preparations
September 15-21, 2016	<i>MV Tiglax</i> , Seward Line Cruise, Mooring Deployment
May-August, 2016	<i>MV Dora</i> , Carbon Glider Development cruises
May 23-27, 2016	<i>MV Island C</i> , Seward Line Cruise- rescheduled
April 29-May 2, 2016	<i>MV Tiglax</i> , Seward Line Cruise
April 11-May 14, 2015	<i>NOAAS Ronald H. Brown</i> , P16N leg 1, Equatorial Pacific Ocean
October 22-28, 2013	<i>RV Endeavor</i> , Co-Chief Sci., UNOLS Chief Sci. Training Cruise
March 16-May 1, 2010	<i>RVIB Nathaniel B. Palmer</i> , western Antarctic Peninsula
September 20-29, 2009	<i>RV Atlantic Explorer</i> , Bermuda
September 9-14, 2009	<i>RV Atlantic Explorer</i> , Bermuda
July 13-19, 2009	<i>RV Atlantic Explorer</i> , Bermuda
May 14-20, 2009	<i>RV Atlantic Explorer</i> , Bermuda
February 20-March 17, 2009	<i>ARSV Laurence M. Gould</i> , western Antarctic Peninsula
February 1-20, 2009	<i>Palmer Station</i> , Antarctica
December 28, 2008-February 1, 2009	<i>ARSV Laurence M. Gould</i> , western Antarctic Peninsula
November 8-16, 2008	<i>RV Atlantic Explorer</i> , Bermuda
September 21-28, 2008	<i>RV Atlantic Explorer</i> , Bermuda
July 16-20, 2008	<i>RV Atlantic Explorer</i> , Bermuda
June 22-30, 2008	<i>RV Atlantic Explorer</i> , Bermuda
April 14-22, 2008	<i>RV Atlantic Explorer</i> , Bermuda
July 24, 2007	<i>RV Tioga</i> , Minority Outreach Volunteer, Woods Hole
August 14-18, 2006	<i>RV Atlantic Explorer</i> , Bermuda
June 22-July 1, 2005	<i>SSV Corwith Cramer</i> , Woods Hole
January 6-February 19 2005	<i>RV Roger Revelle</i> , P16S, South Pacific Ocean
January 2004-June 2005	<i>RV Sea World</i> , Santa Monica Bay, Biweekly Time-series Cruises

OTHER SUPPORTED RESEARCH CRUISES & MOORING DEPLOYMENTS

August-September 2018	<i>RV Sally Ride</i> & <i>RV Roger Revelle</i> , NASA EXPORTS North Pacific
March-May 2018	<i>RV Nathaniel B. Palmer</i> , GO-SHIP S04P Repeat Hydrography
May & September 2014-2017	<i>MV Tiglax</i> , Seward Line Long Term Observational Program
September 2014-Present	Chukchi Ecosystem Observatory
August 2017	<i>RV Kilo Moana</i> , CDISK4
June 2017	<i>RV Sikuliaq</i> , ASGARD 2017
Dec. 2016-January 2017	<i>RV Sikuliaq</i> , POMZ
September 2016	<i>RV Sikuliaq</i> : Carbon Glider Development & Testing
August-October 2015	<i>USCGC Healy</i> , Arctic GEOTRACES, UVP Deployments
August 2015	<i>NOAAS Ronald Brown</i> , Gulf of Alaska Ocean Acidification Cruise
May-June, 2015	<i>NOAAS Ronald Brown</i> , P16N leg 2, North Pacific Ocean

FUNDING (10 Grants totaling over \$18 Million)

- Long-Term Ecological Research (LTER): Resilience in the Environmental Mosaic of the Northern Gulf of Alaska Shelf Ecosystem, National Science Foundation, 2017- 2023, \$6,761,974 (\$332,456 to McDonnell), Co-Investigator
- Synthesizing Optically- and Carbon Export-Relevant Particle Size Distributions for the EXPORTS Field Campaign, National Aeronautics and Space Administration, 2017-2020, \$6,507,760 (\$436,630 to McDonnell), Co-Principal Investigator
- CAREER: Imaging the global patterns and drivers of the ocean's biological carbon pump, National Science Foundation, Award #1654663, 2017-2022, \$753,231, Principal Investigator
- ASGARD: Arctic Shelf Growth, Advection, Respiration and Deposition Rate Experiments, North Pacific Research Board, 2017-2021, \$2,226,543 (\$416,823 to McDonnell), Co-Principal Investigator
- Variability in particle size distributions, sinking velocities, and fluxes in the northern Gulf of Alaska, National Science Foundation, Award #1459835, 2015-2018, \$300,000, Principal Investigator
- Development of an autonomous carbon glider to monitor sea-air CO₂ fluxes in the Chukchi Sea, Coastal Marine Institute, 2015-2017, \$129,696, Co-Principal Investigator
- Northeast Chukchi Sea Physical and Chemical Mooring, Alaska Ocean Observing System (July 2013 – May 2016), \$390,000, Co-Principal Investigator
- Ecosystem monitoring and detection of wind and ice-mediated changes through a year-round physical and biogeochemical mooring in the Northeast Chukchi Sea. North Pacific Research Board: Long-term Monitoring Program, 2015-2020, \$540,000, Co-Investigator
- OCE-RIG: Implementation of Advanced Underwater Optical Instrumentation for the Study of Marine Particle Dynamics in the Arctic Ocean. National Science Foundation, NSF OCE #1421118, 2014-2016, \$109,999, Principal Investigator
- ISOOP: Instrumentation to Assess the Distributions and Roles of Marine Particles, Phytoplankton and Zooplankton. M.J. Murdock Charitable Trust, 2014, \$298,000, Principal Investigator

TEACHING

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| Fall 2017 | The Oceans (MSL 111X UX1, online), 4 credits, 54 enrolled |
| Fall 2016 | The Oceans (MSL 111X UX1, online), 4 credits, 54 enrolled |
| Fall 2016 | Institute of Marine Science Seminar (MSL 492/692), 1 credit, 6 enrolled |
| Spring 2016 | Oceans of Change Seminar (MSL 692 F02), 1 credit, 4 enrolled |
| Spring 2016 | Institute of Marine Science Seminar (MSL 692), 1 credit, 2 enrolled |
| Fall 2015 | The Oceans and Global Change (MSL 294), 3 credits, 5 enrolled |
| Fall 2015 | Institute of Marine Science Seminar (MSL 692), 1 credit, 5 enrolled |
| Fall 2015 | Interdisciplinary Oceanography (MSL 697 F04), 1 credit, 1 enrolled (independent study) |
| Spring 2015 | Chemical Oceanography (MSL 660), 3 credits, 2 enrolled |
| Fall 2014 | The Oceans and Global Change (MSL 294), 3 credits, 7 enrolled |
| Spring 2014 | Institute of Marine Science Seminar (MSL 492/692), 1 credit, 4 enrolled |
| Fall 2013 | Physical, Chemical, Biological Interactions in the Oceans (MSL 694), 3 credits, 4 enrolled |
| Fall 2013 | The Oceans (MSL111X), Substitute Lecturer |
| Spring 2013 | Chemical Oceanography (MSL 660), 3 credits, 3 enrolled (co-taught with Aguilar-Islas) |
| Fall 2012 | Benthic Ecology (MSL 654), Guest Lecturer |
| Fall 2011 | Term Paper Tutor, Biogeochemistry and Pollutant Dynamics, ETH Zurich |

STUDENTS

Graduate Students (Major Advisor):

- 2013-2015 Jessica Turner, M.S., Oceanography (Graduated December 2015):
Thesis title: "Investigating marine particle distributions and processes using in situ optical imaging in the Gulf of Alaska"
- 2015-Present Jessica Pretty, M.S., Oceanography Candidate
- 2016-Present Rachel Lekanoff, M.S., Oceanography Candidate
- 2017-Present Stephanie O'Daly, M.S. Oceanography Candidate

Graduate Students (Committee Member):

- Ying-Chih Fang (Ph.D, Oceanography)
- Megan Roberts (Ph.D., Environmental Chemistry)
- Veronica Padula (Ph.D., Marine Biology)
- Vincent Domena (M.S., Oceanography)
- Arianna Demmerly (Ph.D., Biochemistry, External Thesis Examiner)
- Jonathan Whitefield (M.S., Oceanography)
- Pallavi Hariharan (M.S., Oceanography)
- Stacey Reisdorph (M.S., Oceanography)
- Elise Van Meersshce (Ph.D., Oceanography)
- Marijke Habermann (Ph.D., Geophysics, External Thesis Examiner)
- Emanuel Laurenceau (Ph.D., University of Tasmania, External Thesis Examiner)

Undergraduate Students (Supervisor):

- Gabrielle Johnson, Undergraduate Research Assistant, 2015
- Telayna Gordon, Undergraduate Research Assistant, 2014

PROFESSIONAL DEVELOPMENT

- Faculty Advisor Training, Fall 2017
- Title IX Training, Summer 2017
- UAF iTeach Program, UAF eLearning workshop, Fall 2015
- Hazardous Communication Training, 2014
- Protection of Minors Policy and Reporting Procedures Training, 2014
- Title IX Training, 2014
- Supervising Graduate Students, 2013
- UNOLS Chief Scientist Training Cruise, Co-Chief Scientist, 2013
- Scholarly Writing Workshop, Bob Lucas, Office of Faculty Development, UAF, 2013
- Grant Writing Workshop, Bob Lucas, Office of Faculty Development, UAF, 2013
- Managing your Grant, Office of Faculty Development, UAF, 2013
- Best Practices in the Use of Technology for Teaching, Office of Faculty Development, UAF, 2013

Understanding by Design: Backwards Syllabus Design, Office of Faculty Development, UAF, 2012
Teaching Circle, Office of Faculty Development, UAF, 2012
Hands-on Blackboard Training, Office of Faculty Development, UAF, 2012
Promotion, Tenure, Pre-Tenure and Post-Tenure Review File Preparation Workshop, Office of Faculty Development, UAF, 2012
Safety Training, UAF, 2012
New Faculty Orientation, Office of Faculty Development, UAF, 2012
Better Teaching @ MIT, Graduate Teaching Program participant, 2009-2010

PROFESSIONAL SERVICE

Ocean Science Meeting 2018, Co-Chair of Session ID#28075, “We shed light: Optical and imaging insights into the Biological Carbon Pump”,
Reviewer for Nature, Nature Geoscience, Scientific Reports, Deep Sea Research, Limnology and Oceanography, Geophysical Research Letters, Biogeosciences, Journal of Geophysics-Oceans, Progress in Oceanography, Marine Chemistry, National Science Foundation, M. J. Murdock Charitable Trust, and NASA
Scientific Committee on Ocean Research (SCOR) Working Group 150: Translation of Optical Measurements into particle Content, Aggregation & Transfer (TOMCAT), Associate Member, 2016-Present
The Biology of the Biological Carbon Pump Workshop, Organizing Committee Member, 2015-2016
Search Committee Member for the Editor in Chief: Journal of Geophysical Research–Biogeosciences, 2014

DEPARTMENTAL AND UNIVERSITY SERVICE

R/V Sikuliaq Ship Committee, UAF, College of Fisheries and Ocean Sciences 2017-present
Research Working Group, UAF, College of Fisheries and Ocean Sciences 2016-present
Learning Outcomes Assessment Committee, University of Alaska Fairbanks, 2015-2016
Faculty Senate, University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, 2014-2016
Special Program Review Committee, University of Alaska Fairbanks, 2014-2015
Program Review Committee, University of Alaska Fairbanks 2014-2015
Grade Appeal Committee, University of Alaska Fairbanks, Summer 2014
Website Advisory Committee, School of Fisheries and Ocean Sciences, 2013-2014
Faculty Senate, Alternate, University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, 2013-2014

PUBLIC OUTREACH and SERVICE

Meeting with Senator Murkowski: Climate Change, Climate Policy, and Energy, September 2017
Alaska Ocean Technology Innovation Sprint (OTIS), Mentor, 2017
Renewable Energy Goal Committee, Golden Valley Electric Association, Summer 2017
Ocean Technology and Innovation Cluster Meeting, Seward, AK, July 2017
North Pacific Research Board Arctic Program Blog Post “Making Preparations”, June 2017
Outreach Presentation: ASGARD, Nome, AK, June 2017
Outreach Presentation: Ocean Carbon Research, Museum of the Aleutians, Unalaska, AK, June 2017
R/V Sikuliaq Ship Tour Organizer and Guide, Dutch Harbor, Alaska, June 2017

Meetings with Alaska's Members of Congress (Senators Murkowski, Sullivan, and Rep. Young), Climate change and climate policy, Washington DC, June 2016

Arctic Science Summit Week, Family Game Night Volunteer, March 16, 2016

I Know I Can Program, Anne Wien Elementary School, November 16, 2015

Member Advisory Committee, Golden Valley Electric Association, Fall 2015-Present

Science Video Narrator: Rapidly acidifying waters pose major threat for Southern Ocean ecosystem Fall 2015 (>1,000 views on Youtube)

CCL University, Online Public outreach presentation, The effects of ocean warming, September 2015

Chena Hot Springs Renewable Energy Fair, Public outreach presentation on climate change, renewable energy, and policy, August 2015

Meetings with Alaska's Members of Congress (Offices of Senators Murkowski, Sullivan, and Rep. Young), Climate change and climate policy, Washington DC, June 2015

Oceans and Global Change, Public outreach presentation, Citizens' Climate Lobby International Conference, Washington DC, June 2015

Dan Fagan Radio Show (Anchorage, Alaska), Expert interviewee on climate change and policy, KUAC/Alaska Public Radio (Fairbanks, Alaska), Expert interviewee on climate change and policy, October 2014

Climate Change Outreach and Advocacy, Fairbanks Citizens' Climate Lobby, 2014-present

Alaska Native Science and Engineering Program, Guest Speaker, 2014

Science Fair Judge, Anne Wien Elementary School Science Fair, 2013

Judge of Student Papers, National Ocean Science Bowl, 2013.

WHOI Coastal Oceans Institute Newsletter, Contributing Author, 2010

Vineyard Haven Public Library, Evening Lecture Series, Invited Speaker, 2010

Woods Hole Partnership in Education Program, Ocean Chemistry and Climate Change, 2009

Palmer Station, Antarctica, Visitor outreach participant, February 2009

Minorities Striving and Pursuing Higher Degrees of Success in Earth System Science, 2007

WHOI Ocean Science Journalism Fellowship Program, Guest Speaker, 2007.

AWARDS, FELLOWSHIPS, and SCHOLARSHIPS

National Science Foundation: Faculty Early Career Development (CAREER) Award, 2017

UNAC Faculty Development Travel Award, Spring 2016

UNAC Faculty Development Travel Award, Spring 2015

Antarctica Service Medal, 2011

Joint Program Alumni Fellowship, Woods Hole Oceanographic Institution, 2005

Dean's Honor List, Winter 2005, Spring 2005, UCLA, School of Engineering and Applied Science

International Rectifier Community Scholarship, 2000, 2001

Temecula Sunrise Rotary Leadership Scholarship, 2000