

Alice M Carter

Assistant Professor of the Practice
Department of Mathematics and Statistics
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EDUCATION

Duke University Durham, NC
Ph.D. in Ecology 2021

- Dissertation: “Shifting thermal and metabolic regimes in a low gradient, temperate river network”
- Committee: Dr. Emily S Bernhardt (advisor), Dr. Jim B Heffernan (co-advisor), Dr. Martin W Doyle, and Dr. Ashley M Helton
- Certificate in College Teaching

Northwestern University Evanston, IL
B.A. in Integrated Science, Mathematics and Geology (triple-major) 2012

- Graduated *Phi Beta Kappa* and *cum laude*, GPA: 3.77
- Honors Thesis: “Vista Alegre: A multiproxy environmental reconstruction from sediment cores”
- Advisor: Dr. Patricia A Beddows

Marine Biological Laboratory Woods Hole, MA
Semester in Environmental Science Fall 2011

- Independent Project: “Microbial community productivity and diversity as responses to pH oscillation frequency”
- Advisor: Dr. Joseph Vallino

EXPERIENCE

Department of Mathematics and Statistics, Utah State University Logan, UT
Assistant Professor of the Practice 2025–Current

- Teach courses in statistics at undergraduate and graduate levels
- Research in biogeochemistry and carbon cycling, timeseries methods in ecology, sparse modeling approaches

Ecology Center, Utah State University Logan, UT
Statistical Consultant 2025–Current

- Advise graduate students and faculty on statistical practices for their research

Flathead Lake Biological Station, University of Montana Polson, MT
Postdoctoral Researcher working with Dr. Robert O Hall Jr. 2021–2024

- Modelscape EPSCoR Track II Project on ecological modeling and methods development.
- Consortium for Research on Environmental Water Systems (CREWS) Project

Oceanic Flux Program, Marine Biological Laboratory Woods Hole, MA
Research Assistant to Dr. Maureen Conte 2014–2016

Toolik Lake Long Term Ecological Research Station (LTER) North Slope, AK
Lakes and Nutrient Research Assistant to Dr. Anne Giblin Summer 2013, 2014

Semester in Environmental Science, Marine Biological Laboratory Woods Hole, MA
Professional Teaching Assistant Fall Semester 2012, 2013

14. **Carter, A.M.**, M.J. Vlah, and E.S. Bernhardt. 2026. The energetics of New Hope Creek fifty years after the first measurement of river metabolism. *Limnology and Oceanography*, 71(1), <https://doi.org/10.1002/lno.70313>.
13. **Carter, A.M.**, R.O. Hall, R. Feijo, M. DeGrandpre, Q. Shangguan, H.M. Valett. 2025. Algal assemblage drives patterns in ecosystem structure but not metabolism in a productive river. *Ecology*, 106(12), <https://doi.org/10.1002/ecy.70262>.
12. Young, F.L., Colman, B., **Carter, A.M.**, Feijó de Lima, R., Shangguan, Q., Payn, R.A., DeGrandpre, M.D. 2025. Variability and controls of pCO₂ and air-water CO₂ fluxes in a productive river. *Journal of Geophysical Research: Biogeosciences*, 130(2), <https://doi.org/10.1029/2024JG008434>.
11. **Carter, A.M.**, H. E. Lowman, J. R. Blaszczak, C. C. Barbosa, M. DeSiervo, C. L. Torrens, M. R. Dunkle, S. M. Collins, I. Oleksy, L. R. Katona, R.O. Hall. 2024. Exceptions to the heterotrophic rule: prevalence and drivers of autotrophy in streams and rivers. *ECOSYSTEMS*. <https://doi.org/10.1007/s10021-024-00933-w>
10. Sadler, J., L. Koenig, G. Gorski, **A.M. Carter**, and R.O. Hall. 2024. Evaluating a Process-Guided Deep Learning Approach for Predicting Dissolved Oxygen in Streams. *Hydrological Processes*, 38(9), e15270, <https://doi.org/10.1002/hyp.15270>
9. Lowman, H. E., M. DeSiervo, R. O. Hall Jr., J. P. Jahner, S. O. Jimoh, D. C. Laughlin, A. C. Patterson, C. Weiss-Lehman, C. C. Barbosa, K. L. Bell, J. R. Blaszczak, C. A. Buerkle, **A. M. Carter**, S. M. Collins, V. DeLeo, M. Dunkle, D. Gannon, E. M. Grames, J. G. Harrison, S. E. McFarlane, I. Oleksy, B. F. Powers, C. Ray, A. Stears, B. Summers, C. L. Torrens, M. Trentman, C. M. Werner, L. G. Shoemaker. 2024. Collaborative consortia can boost postdoctoral workforce development. *Proceedings of the National Academy of Sciences Opinion*, 121, 28, <https://doi.org/10.1073/pnas.240181212>.
8. Helton, A., J. Morse, E. Sudduth, M. Ardón, R. Bier, K. Voss, M. Ross, J. Blaszczak, J. Brandt, M. Simonin, J. Rocca, **A.M. Carter**, J. Gerson, E. Ury, M. Vlah. 2023. At the interfaces of the hydrologic sciences: Connecting water, elements, ecosystems, and people through the major contributions of Dr. Emily Bernhardt, *Journal of Hydrology*, <https://doi.org/10.1016/j.jhydrol.2023.129251>
7. DelVecchia, A.G., S. Rhea, K.S. Aho, E.H. Stanley, E.R. Hotchkiss, **A.M. Carter**. 2023. Variability and drivers of CO₂, CH₄, and N₂O concentrations in streams across the United States, *Limnology and Oceanography*, <https://doi.org/10.1002/lno.12281>
6. Blaszczak, J.R., L.E. Koenig, F.H. Mejia, L. Gómez-Gener, C.L. Dutton, **A.M. Carter**, N.B. Grimm, J.W. Harvey, A.M. Helton, M.J. Cohen. 2022. Extent, patterns, and drivers of hypoxia in the world's streams and rivers, *Limnology and Oceanography Letters*, <https://doi.org/10.1002/lol2.10297>
5. **Carter, A.M.**, A.G. DelVecchia, and E.S. Bernhardt. 2022. Patterns and drivers of dissolved gas concentrations and fluxes along a low gradient stream, *Journal of Geophysical Research: Biogeosciences*, 127, <https://doi.org/10.1029/2022JG007048>
4. Bernhardt, E.S., P. Savoy, M.J. Vlah, A.P. Appling, L.E. Koenig, R.O. Hall, M. Arroita, J.R. Blaszczak, **A.M. Carter**, M. Cohen, J.W. Harvey, J.B. Heffernan, A.M. Helton, J.D. Hosen, L. Kirk, W.H. McDowell, E.H. Stanley, C.B. Yackulic, and N.B. Grimm. 2022. Light and flow regimes regulate the metabolism of rivers, *Proceedings of the National Academy of Sciences*, 119, 8, <https://doi.org/10.1073/pnas.2121976119>
3. **Carter, A.M.**, J.R. Blaszczak, J.B. Heffernan, and E.S. Bernhardt. 2021. Hypoxia dynamics and spatial distribution in a low gradient river, *Limnology and Oceanography*, 66, 6, p. 2251-2265. <https://doi.org/10.1002/lno.11751>
2. Conte, M.H., **A.M. Carter**, D. Koweek, S. Huang, and J.C. Weber. 2019. The elemental composition of the deep particle flux in the sargasso sea, *Chemical Geology*, 511, p. 279-313. <https://doi.org/10.1016/j.chemgeo.2018.11.001>
1. Beddows, P.A., J.B. Glover, D. Rissolo, **A.M. Carter**, R. Jaijel, D.M. Smith, and B. Goodman-Tchernov. 2016. The Proyecto Costa Escondida: Recent interdisciplinary research in search of freshwater along the north coast of Quintana Roo, Mexico, *WIREs Water*, 3, 5, p. 749-761. <https://doi.org/10.1002/wat2.1161>

DATA SETS AND OTHER RESEARCH PRODUCTS

5. Vlah, M.J., E.S. Bernhardt, **A.M. Carter**, et.al. 2025. StreamPULSE Sensor Data and Metabolism Estimates for Rivers and Streams. HydroShare. <http://www.hydroshare.org/resource/0c9c4c2fe8914690af8b3c8495503d7c>
4. Valett, H.M., **A.M. Carter**, J. Prater, C.R. Utzman, and R.F. Lima. 2023. Temperature and concentration of dissolved oxygen in river water measured in the Upper Clark Fork River (Montana, USA) during 2020 and 2021 ver 2. Environmental Data Initiative. <https://doi.org/10.6073/pasta/f24a105ec10af98edc7c9314b703e4fc>.
3. Blaszcak, J.R., L.E. Koenig, F.H. Mejia, L. Gomez-Gener, C.L. Dutton, **A.M. Carter**, N.B. Grimm, J.W. Harvey, A.M. Helton, M.J. Cohen, et.al.. 2021. Global River Dissolved Oxygen Database, United States Geological Survey. NSF-PAR ID: 10302874.
2. **Carter, A.M.**. 2021. Shifting thermal and metabolic regimes in a low gradient, temperate river network, *Duke University Doctoral Dissertation*. <https://hdl.handle.net/10161/23088>
1. **Carter A.M.** and P.A. Beddows. 2013, Holocene sea level and paleo-evaporation record from the maritime Maya port city of Vista Alegre, Quintana Roo. Technical Report for the *Instituto Nacional de Antropologia e Historia de Mexico*.

TEACHING AND MENTORING

Modern Regression Methods (STAT 5100/6100) at Utah State University <i>Instructor</i>	Fall 2025 - Present
Ecological Models and Data (BIO 595) at the University of Montana <i>Co-Instructor</i>	Spring 2024 <i>Primary Instructor: Dr. Robert Hall</i>
Ecology for a Crowded Planet (BIO 209) at Duke University <i>Teaching Assistant</i>	Spring 2021 <i>Instructors: Dr. Justin Wright and Dr. Jean Philippe Gibert</i>
Field Ecology (BIO 361) at Duke University <i>Teaching Assistant</i>	Fall 2019, Fall 2018 <i>Instructor: Dr. Justin Wright, Dr. Emily Bernhardt</i>
StreamPulse Data+ Big Data Initiative at Duke University <i>Co-leader of the research team</i>	Summer 2019
Semester in Environmental Science at The Marine Biological Laboratory, Woods Hole, MA <i>Professional Teaching Assistant</i>	Fall 2012, 2013 <i>Director: Dr. Ken Foreman</i>
Geology Spring Break Field Trip to Quintana Roo, Mexico at Northwestern University <i>Teaching Assistant</i>	Spring 2013 <i>Instructor: Dr. Patricia Beddows</i>

Guest Lectures

- “Alternative variable types in multiple regression” - Advanced Undergraduate Regression course (STAT 5100) at Utah State University Fall 2024
- “Bayesian Models for Ecological Memory” - Graduate Ecology Seminar at University of Wyoming Spring 2022
- “Freshwaters in the Anthropocene” - Intro to Env Sci and Policy (ENV 102) at Duke University Spring 2020
- “Data Analysis for Ecological Modeling” - Field Ecology (BIO 361) at Duke University Spring 2019

Teaching Coursework

- Duke University Certificate in College Teaching 2016–2021
- College Teaching and Visual Communication (GS 760) Spring 2020
- College Teaching and Course Design (GS 755) Fall 2019
- Fundamentals of College Teaching (GS 750) Spring 2019

Students Mentored

- **Laura Fletcher** - Ph.D. Biology Committee Member at Utah State University Current
- **Caroline Torman** - Undergraduate researcher at Utah State University Current
- **Julianne Kirby** - Undergraduate senior thesis at University of Virginia 2024
- **Niko Linder** - Undergraduate senior thesis at Colorado College 2023
- **Wyatt Jernigan** - Duke University Undergraduate Researcher 2020
- **Leonard Shaw** - Metcalf Undergraduate Summer Fellow at the Marine Biological Laboratory 2014

RESEARCH SUPPORT AND FELLOWSHIPS

\$12,150	Duke University Bass Instructional Fellowship: Instructor of Record for Fresh Waters of the Anthropocene. PI: A.M. Carter. 2020 * <i>Course did not run due to COVID-19 pandemic closure. Syllabus available on request.</i>
\$3,802	Duke University Wetland Center Graduate Student Research Support Grant: Carbon cycling and anaerobic metabolism in ponded stream wetlands. PI: A.M. Carter. 2019
\$25,000	Rhodes Information Initiative at Duke University Data+ Big Data Initiative: Stream-PULSE: From Streaming Data to Stream Insights. PIs: E.S. Bernhardt, A.M. Carter and M.J. Vlah. 2019
\$3,000	Rhodes Information Initiative at Duke University Data Expeditions: Data Analysis for Ecological Modeling. PIs: A.M. Carter and E.A. Ury. 2019
\$1,000	Duke University Biology Department Grant in Aid of Research: Carbon cycling and energetics in Piedmont streams. PI: A.M. Carter. 2019
\$985	Consortium of Universities for the Advancement of Hydrologic Sciences, Inc (CUAHSI): Instrumentation Discovery Travel Grant. PIs: A.M. Carter and R.O. Hall. 2018
\$5,500; \$5,500	Duke University Summer Research Funding Grant. 2018; 2017
\$974	Duke University Biology Department Grant in Aid of Research: Greenhouse gas fluxes and dark metabolic processes in rivers. PI: A.M. Carter. 2018
\$25,000	American Meteorological Society First Year Graduate Fellowship. 2016
\$1,000	Institute for Sustainability and Energy at Northwestern University: Undergraduate Research Grant. 2012
\$5,000	Woods Hole Oceanographic Institution Summer Student Fellowship. 2011

HONORS AND AWARDS

- Duke University Preparing Future Faculty Fellow 2020
- Duke University Environmental Impact Fellow 2019
- Ecological Forecasting Summer Workshop Fellow at Boston University 2018
- Seymore Schlanger Memorial Award for Excellence in Earth and Planetary Sciences, Northwestern University 2012
- Phi Beta Kappa, Northwestern University 2012
- Siemens Scholarship for achievement in Mathematics and Science 2008
- Mathematics Sterling Scholar, Utah State Winner 2008

PRESENTATIONS

Seminars

6. **Carter A.M.** Examining a hidden carbon system: Linking carbon fluxes and carbon stocks in stream ecosystems to predict their metabolic response to climate change. *Utah State University Statistics Seminar*. January 29, 2026; Logan, UT
5. **Carter A.M.** Linking carbon fluxes and carbon stocks in stream ecosystems to predict their metabolic response to climate change. *University of Utah Mathematical Biology Seminar*. April 15, 2025; Salt Lake City, UT
4. **Carter A.M.** Transforming carbon in rivers: how organisms, water flow, and time shape ecosystems. *Flathead Lake Biological Station Summer Data and Donuts Seminar Series*. July 3, 2023; Polson, MT
3. **Carter, A.M., R.O. Hall.** Linking algal biomass and metabolism using Bayesian time series models. *Flathead Lake Biological Station Seminar Series*. Jan 19, 2023; Polson, MT.
2. Hall, R.O., J.R. Blaszczak, H. Lowman, B. Summers, **A.M. Carter**, L. Genzoli, S. Collins, B. Oleksy. Modelscape Aquatic Consortium Overview. *Flathead Lake Biological Station Seminar Series*. Oct 21, 2021; Polson, MT. (Virtual)
1. **Carter, A.M.** Shifting thermal and metabolic regimes in a low gradient, temperate river network. *Duke University Program in Ecology Seminar Series*. March 30, 2021; Durham, NC. (Virtual)

Invited Talks

2. **Carter, A.M., J.R. Blaszczak, L.E. Koenig, F.H. Mejia, L. Gómez-Gener, C.L. Dutton, N.B. Grimm, J.W. Harvey, A.M. Helton, M.J. Cohen.** Extent, patterns, and drivers of hypoxia in the world's streams and rivers, *American Society for Limnology and Oceanography Annual Meeting*. March, 2025; Charlotte, NC.
1. **Carter, A.M., J.R. Blaszczak, E. Moore, M. Doyle, A.M. Helton, J.B. Heffernan, E.S. Bernhardt.** The prevalence of Hypoxia in River Networks and the Role of Not So Dead Zones in Element Cycling. *Society for Freshwater Science Annual Meeting*. May 20-23, 2019; Salt Lake City, UT

Contributed talks

15. Patterson, A., A. Stears, M. DeSiervo, D. Gannon, **A. M. Carter**, C. Torrens, C. Weiss-Lehman, S. Jimoh, J. Blaszczak, J. Jahner, L. Shoemaker. Approaches for handling missing data in ecological time series: a comparison of methods. *Ecological Society of America Annual Meeting*. Aug 11-14, 2025; Baltimore, MD
14. Hall, R.O., **A.M. Carter**, C. Yackulic. Understanding residual error in riverine metabolism models. *Society for Freshwater Science Annual Meeting*. Jun 12-17, 2025; San Juan, PR
13. **Carter, A.M., R.O. Hall, R. Fiejo, Q. Shangguan, M. DeGrandpre, H.M. Valett.** Linking algal assemblages to reach-scale metabolism estimates in a productive river. *Society for Freshwater Sciences Annual Meeting*. Jun 2-6, 2024; Philadelphia, PA
12. **Carter, A.M., R.O. Hall, H. Lowman, et al.** Autotrophy in streams and rivers. *Montana Aquatic Research Colloquium*. Apr 11-13, 2024; Polson, MT
11. **Carter, A.M., R.O. Hall, R. Fiejo, Q. Shangguan, M. DeGrandpre, H.M. Valett.** Linking stream carbon cycling and algal biomass dynamics. *Gordon Research Conference on Catchment Sciences*. June 18-23, 2023; Andover, NH
10. **Carter, A.M., R.O. Hall, R. Fiejo, Q. Shangguan, M. DeGrandpre, H.M. Valett.** Quantifying algal controls on riverine productivity in a Bayesian framework. *American Geophysical Union Annual Meeting*. Dec 12-16, 2022; Chicago, IL.
9. **Carter, A.M.** and R.O. Hall. Linking metabolism and algal biomass in the Upper Clark Fork River. *Consortium for Research on Environmental Water Systems EPSCoR All Hands Meeting*. Sept 7-8, 2022; Anaconda, MT

8. Sadler, J., L. Koenig, G. Gorski, **A.M. Carter**, R.O. Hall. Process-guided deep learning for predicting dissolved oxygen in river networks. *American Geophysical Union Frontiers in Hydrology Meeting*. June 20-24, 2022; San Juan, PR.
7. Koenig, L., J. Sadler, G. Gorski, **A.M. Carter**, R.O. Hall. Predicting dissolved oxygen in river networks using process-guided deep learning. *Joint Aquatic Sciences Meeting*. May 16-20, 2022; Grand Rapids, MI.
6. DelVecchia, A.G., S. Rhea, K.S. Aho, E.H. Stanley, E.R. Hotchkiss, **A.M. Carter**, E.S. Bernhardt. Ignoble NEON gas: drivers of CO₂, CH₄, and N₂O concentrations across the United States. *Joint Aquatic Sciences Meeting*. May 16-20, 2022; Grand Rapids, MI.
5. Koenig, L., A.M. Helton, P. Savoy, **A.M. Carter**, E. Moore, J.B. Heffernan, E.S. Bernhardt. How the Spatial Structure of Light Shapes Metabolic Regimes Within and Across River Networks. *Society for Freshwater Science Annual Meeting*. May 20-23, 2019; Salt Lake City, UT
4. Blaszcak, J.R., **A.M. Carter**, C.L. Dutton, L. Gomez-Gener, N.B. Grimm, J.D. Harvey, A.M. Helton, L. Koenig, F.H. Mejia, M.J. Cohen. Patterns and drivers of global riverine hypoxia. *American Geophysical Union Annual Meeting*. Dec 9-13, 2019; San Francisco, CA.
3. **Carter A.M.**, J.R. Blaszcak, E. Moore, M. Doyle, J.B. Heffernan, E.S. Bernhardt. Lentic Rivers, Dark Energy, and Dead Zones: Emerging Insights into Southeastern River Networks in the Anthropocene. *American Geophysical Union Annual Meeting*. Dec 10-14, 2018; Washington DC.
2. **Carter A.M.** Controls on Particle Export from the West Antarctic Peninsula, *Woods Hole Oceanographic Institute REU Symposium*. Aug 2011; Woods Hole, MA.
1. **Carter A.M.** Microbial Community Productivity and Diversity as Responses to pH Oscillation Frequency. *Marine Biological Laboratory Semester in Environmental Science Symposium*. Dec 2010; Woods Hole, MA.

Sessions Organized

2. Smith, J.D., J. Sadler, **A.M. Carter**, J. Willard. Advances in Water Quality Prediction. *Special session at the American Geophysical Union Annual Meeting*. Dec 12-16, 2022; Chicago, IL.
1. **Carter, A.M.**, H. Lowman, B. Oleksy, L. Koenig, J. Blaszcak. Ecological models as a tool for integrating aquatic sciences. *Special session at the Joint Aquatic Sciences Meeting*. May 14-20, 2022; Grand Rapids, MI.

Posters

9. **Carter, A.M.**, R.O. Hall. Linking algal biomass and stream productivity in the Clark Fork River. *Gordon Research Conference on Catchment Sciences*. June 18-23, 2023; Andover, NH.
8. **Carter, A.M.**, R.O. Hall. Ecological memory in river metabolic fluxes. *Joint Aquatic Sciences Meeting*. May 16-20, 2022; Grand Rapids, MI.
7. **Carter, A.M.**, E.S. Bernhardt. Do pools respire more? Longitudinal metabolism in a low-flow stream. *Society for Freshwater Sciences Annual Meeting* May 18, 2020 (Virtual)
6. **Carter, A.M.**, A. Ulseth, L. Koenig, J.B. Heffernan, E.S. Bernhardt. To Model or To Measure: the challenges of constraining gas evasion estimates for accurate estimation of whole-stream metabolism. *Society for Freshwater Sciences Annual Meeting* May 20-24, 2018; Detroit, MI.
5. Bernhardt, E.S., P. Savoy, J.B. Heffernan, **A.M. Carter**. StreamPulse. *NSF Macrosystems Meeting*. Jan 8-10, 2018; Washington, DC.
4. **Carter A.M.**, J.B. Heffernan, E.S. Bernhardt. The Contribution of Dark Metabolism to Stream Ecosystem Energetics. *Society for Freshwater Sciences Annual Meeting*. Jun 4-8, 2017; Raleigh, NC.
3. **Carter A.M.**, E.S. Bernhardt, J.B. Heffernan. Anaerobic Metabolic Processes in Streams. *American Meteorological Society Annual Meeting*. Jan 22-26, 2017; Seattle, WA

2. **Carter A.M.**, M.H. Conte, J.C. Weber, L. Shaw. Phosphorus Phase Associations in the Deep Ocean Particle Flux in the Sargasso Sea. *American Society for Limnology and Oceanography - Ocean Sciences Meeting*. Feb 22-26, 2016; New Orleans, LA.
1. **Carter A.M.** and P.A. Beddows, Holocene Sea-level and Paleo-evaporation Record from the Maritime Maya Port City of Vista Alegre, Yucatan Peninsula. *Geological Society of America Annual Meeting* Nov 4-7, 2012; Charlotte, NC.

SERVICE

- USU Ecology Center Data Workshop Series Organizer Fall 2025 –present
- USU Ecology Center Graduate Coding Mentor Program Coordinator Spring 2025 –present
- Flathead Lake Biological Station Seminar Organizer 2022–2023
- Duke University Program in Ecology Executive Committee PhD student representative 2017–2020
- Ecology Symposium Coordinator, Duke University 2018, 2016
- River Center Chalk Talk Organizer, Duke University 2018–2019
- Graduate Afternoon Seminar Series Coordinator, Nicholas School for the Environment, Duke University 2017–2018

Review Contributions

(Arranged by most frequent contributions, then most recent)

Peer Reviews

- Ecology
- Freshwater Science
- Limnology and Oceanography
- Global Change Biology
- Geophysical Research Letters
- Nature
- Ecological Applications
- Water Resources Research
- Ecological Indicators
- Aquatic Sciences
- Nature Water
- Hydrobiologia
- Canadian Journal of Fisheries and Aquatic Sciences

Proposal Reviews

- NSF Water, Landscape, and Critical Processes Program
- USU Ecology Center Graduate Research proposals

TECHNICAL SKILLS

- **Mathematics:** Bayesian statistics, multivariate calculus, abstract and linear algebra, Fourier analysis, complex analysis, probability. Completed an undergraduate degree in Mathematics at Northwestern University.
- **Domain Knowledge:** Biogeochemistry, stream ecology, water quality monitoring, watershed hydrology, experimental design and execution, science communication.
- **Programming and Software:** R, Stan, Rshiny, LateX, Bash, beginner Python, Git, Github, vim, Google Earth Engine, SQL, Slurm
- **Modeling Approaches:** Bayesian probabilistic models, state-space models, time series models, near term forecasting

PROFESSIONAL REFERENCES

Robert O. Hall Jr. (Postdoctoral Advisor),
Professor
University of Montana,
Flathead Lake Biological Station
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130 Science Dr., Durham, NC 27708
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