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EDUCATION

- Aug '20 – Present **Ph.D. Candidate, Oceanography**
Specialization: Biological Oceanography
The University of British Columbia
Vancouver, BC, Canada
Advisor: Evgeny Pakhomov
Thesis: “An improved understanding of *Salpa thompsoni* diel vertical migration and its influence on Southern Ocean ecosystem structure and function”
- Jan '17 – Aug '18 **MSc, Environmental Sciences and Policy**
Specialization: Environmental Management
Johns Hopkins University
Washington, DC, United States
Advisor: Jerry Burgess
Capstone: “Understanding the Effects of Doubled CO₂ on the Biological Pump in an Earth System Model: An Imperative for Ocean Science and International Climate Change Policy”
Relevant Coursework: Oceanic & Atmospheric Processes, Hydrology & Water Resources, Statistics and Political Analysis, Geological Foundations of Environmental Science, Climate Change Policy Analysis, Science of Climate Change and its Impact
- Sep '12 – Aug '15 **BSc, Environmental Science**
Loyola University Chicago
Chicago, IL, United States
Advisor: Christopher Peterson
Capstone: “The Impacts of Blast Fishing and Shark Finning in the South China Sea”
Relevant Coursework: Fundamental Statistics, General Biology I and II, General Chemistry I and II, Applied Calculus I, Calculus II, General Biology Lab, General Chemistry Lab, Intro. to GIS, Human Dimension of Conservation, Environmental Economics, Ecology
- Sep '09 – May '12 **Associate in Arts - Major: Liberal Arts**
Honors: Graduated with Honors
Washtenaw Community College
Ann Arbor, MI, United States

HONORS AND AWARDS

- Aug '22 - Sep '23 National Geographic Early Career Grant
April '22 W.H. Mathews Scholarship
Feb 2022 2022 Ocean Sciences Meeting Registration Award
- Sep '21 - July '22 Li Tze Fong Tri-Council Affiliated Fellowship
- Jan - May '21 W.H. Mathews Scholarship
Jan - May '21 Kit Malkin Scholarship
Nov '20 Vanier Scholar - Departmental Candidate
2020 – 2024 Four Year Doctoral Fellowship plus tuition
2020 – 2024 Faculty of Science Graduate Tuition Award

2020 – 2024	President's Academic Excellence Initiative Ph.D. Award
Sep - Dec '20	International Tuition Award
2012 - 2015	Phi Theta Kappa Honors Society Scholarship
2012 - 2015	Transfer Presidential Scholarship
Jan - May '12	Foundation Scholarship
Sep – Dec '10	Dean's High Honor Roll
Sep – Dec '11	Dean's Honor Roll

RESEARCH EXPERIENCE

- Sep '17 – Sep '20 **Research Assistant**
Department of Earth and Planetary Sciences, Johns Hopkins University
 Baltimore, MD
Supervisor: Anand Gnanadesikan
Responsibilities:
 -Responsible for analyzing quantitative data into qualitative narratives by following current literature
 -Compare GFDL-ESM2Mc with CMIP5 models to analyze uncertainties in simulating physical dynamics
 -Conduct analysis on propagating effects of turbulent diffusion parameter on biological systems
 -Synthesize large amounts of data and research material into scientific papers
 -Determine marine ecosystem change under doubling CO₂ perturbations
 -Analyze changes in biogeochemical cycles under anthropogenic climate change
 -Represent JHU at global conferences by communicating results with scientists and policymakers
 -Draft documents to accurately explain complex information to varying audiences
- Jul '15 – Jan '16 **Research Assistant**
Loyola University Chicago, Institute of Environmental Sustainability
 Chicago, IL
Supervisor: Tham Hoang
Responsibilities:
 -Evaluated Micro-plastic contamination impact on freshwater and saltwater fish species through dissection and light microscopy
 -Characterized developmental effects of plastic pollution on freshwater and saltwater fish species
 -Generated and analyzed biodiversity loss due to the presence of micro-plastics
 -Prepared written documents that translated quantitative data into summarized materials
 -Executed experimental design techniques by testing samples through various chemical analyses and centrifugation techniques
- Jul – Aug '14 **Volunteer Research Assistant**
Tropical Research and Conservation Centre
 Sabah, Malaysia
Supervisor: Fletcher Sunde
Responsibilities:
 -Developed in-the-field processes to plant coral fragments to restore the coral community
 -Interviewed local community members to build consensus on possible alternatives to blast-fishing and shark finning
 -Engaged the local community for educational opportunities
 -Performed the necessary training to be an advanced PADI-certified diver
 -Conducted fish, anemone, shark, ray, and turtle ID surveys to code and identify individuals in partnership with the Photo-ID network

Jun – Jul ‘14

Field Studies Volunteer

Cetacean Research and Rescue Unit

Banff, Scotland

Supervisor: Kevin Robinson

Responsibilities:

- Collected sonar data with an Echo sounding sonar instrument
- Trained in marine mammal rescue techniques
- Synthesized all data into GIS to analyze changing migration patterns
- Conduct photo-identification studies on Bottlenose dolphins, Minke whales, and Porpoises
- Synthesized study materials and data into documents sent to St. Andrews University, University of Aberdeen, and University of Dublin

TEACHING EXPERIENCE

May ‘22 - Aug ‘22 Teaching Assistant, The Ocean Environment (EOSC 315)

The University of British Columbia

Jan ‘22 - April ‘22 Teaching Assistant, The Ocean Ecosystem (EOSC 314)

The University of British Columbia

Jan ‘21 Teaching Assistant, Applied Meteorology (ATSC 114)

The University of British Columbia

Jan ‘21 – May ‘21 Instructor, Climate Measurement and Analysis (EOSC 442)

The University of British Columbia

PROFESSIONAL EXPERIENCE

Dec ‘18 – Aug ‘20 **Coordinator, Perpetual Planet**

National Geographic Society

Washington, DC

Supervisor: Nicole Alexiev

Responsibilities:

- Conducted literature reviews on scientific topics and synthesized them into internal reports
- Developed framework for 2 capacity-building grants and reviewed applications
- Led logistics and planning for 4 local and 1 international convening
- Streamlined communications with internal colleagues and external stakeholders
- Conducted quantitative analysis on biogeochemical cycles in high-alpine and rainforest environments to create an index featured on NG EarthPulse website
- Created presentation materials, expedition science reports, monthly and quarterly financial reports, and other documents in support of the initiative and at the direction of the Senior Program Manager and Vice President
- Managed project organization in Wrike software and served as program point person

Jan – May ‘18

Science and Solutions Intern

The Climate Reality Project

Washington, DC

Supervisor: Marshall Geck

Responsibilities:

- Drafted policy memos and presentation material for former Vice President Al Gore
- Conducted thorough analyses of environmental policy, both national and international
- Curated former Vice President Al Gore’s talking points for Climate Reality training events
- Responsible for writing educational material on current legislation for public viewing
- Identified topical stories and drafted weekly blog posts for the Reality Hub website
- Volunteered to conduct an independent research project to provide future guidance for The Climate Reality Project strategy. This document was titled: ‘Greenhouse Gas Emissions’ Impact on Marine Ecosystems and Future Ocean Sequestration

Jun '16 – Jul '17 **Executive Assistant**
National Immigrant Justice Center
Chicago, IL

Supervisor: Mary Meg McCarthy

Responsibilities:

- Developed, compiled, and organized the annual “Human Rights Awards” Campaign
- Edited law journals and peer-reviewed technical grants
- Raised over \$1 million dollars for the first time in company history by building and sustaining relationships with old and new donors
- Managed and prepared information on immigration law for in-house attorneys
- Trained 2 interns and 1 supervisor in all administrative tasks and legal editing procedures

PEER-REVIEWED PUBLICATIONS

Bahl, A. A., Hunt, B. P. V., & Pakhomov, E. A. (in prep). Estimating the influence of salp size on Southern Ocean active carbon transport. *Progress in Oceanography*.

Lüskow, F., **Bahl, A. A.**, Décima, M., Steinberg, D. K., & Pakhomov, E. A. (in prep). Diel vertical migration patterns of four salp species – biological and environmental drivers for species size- and stage-specificity. *Limnology and Oceanography*.

Kwong, L. E., **Bahl, A.**, & Pakhomov, E. A. (in prep). Micronekton active carbon transport on the southwest coast of Oahu. *Frontiers in Marine Science*.

Décima, M., Stukel, M., Nodder, S., Meyers, M., Fender, C., Kelly, T., Lüskow, F., **Bahl, A. A.**, Pakhomov, E. A., & Pinkerton, M. (in prep). Fecal pellets, death, and migration– quantifying the multiple contributions of salps to carbon export in the Southwest Pacific. *Frontiers in Marine Science*.

Bahl, A., Bahlburg, D., Sylvester, Z., Veytia, D. et al. (in prep). Identifying uncertain mechanisms in modelling Antarctic krill recruitment. *Frontiers in Ecology and Evolution*.

Veytia, D., Sylvester, Z., **Bahl, A.**, Bahlburg, D., et al. (in prep). Exploring the consequences of mechanistic uncertainty in modelling krill populations across scales. *Frontiers in Ecology and Evolution*.

Veytia, D., **Bahl, A.**, Sylvester, Z., Bahlburg, D., Murphy, E., Corney, S., Hofmann, E., Johnston, N., Meyer, B., & Brooks, C. (2021). Report of the online Integrating Climate and Ecosystem Dynamics of the Southern Ocean (ICED) workshop: Using models to improve our understanding of Antarctic krill and their ecological role in the Southern Ocean. 17-20 May 2021, virtual. <https://bit.ly/2UZIWjR>

Bahl, A., Gnanadesikan, A., and Pradal, M.-A. (2020). Scaling global warming impacts on ocean ecosystems: Lessons from a suite of Earth System Models. *Frontiers in Marine Science: Global Change and the Future Ocean*.

Kristofer R. Covey, Soper, F.M, Bernardino, A.F., Pangala, S., Pagliaro, Z., Lovejoy, T., Basso, L., Fearnside, P., Marengo, J., Navarrete, D., Novoa, S., Cassol, H., Bernasconi, P., Davila, E., Freitas, C.T., Gatti, L., Hoffman, B., Mayorga, J., Mellow, R., Mesquita, R., Nardotto, G., Nobre, I., Pavan, S., Peres, C., Pinto, F., Blaine, T., Elmore, A., & **Bahl, A.** (2021). Carbon and Beyond: Towards a holistic understanding of the biogeochemistry of climate in a rapidly changing Amazon. *Frontiers in Forests and Global Change*.

Immerzeel, W.W., Lutz, A.F., Andrade, M., **Bahl, A.**, Biemans, H., Bolch, T., et al. (2019). Importance and vulnerability of the world’s water towers. *Nature Research*. DOI:10.1038/s41586-019-1822-y

Bahl, A., Gnanadesikan, A., and Pradal, M.-A. (2019). Variations in ocean deoxygenation across Earth System Models: Isolating the role parametrized eddy mixing. *Global Biogeochemical Cycles*. DOI:10.1029/2018GB006121

CONFERENCE PRESENTATIONS

Lüskow, F., **Bahl, A. A.**, Décima, M., Steinberg, D. K., & Pakhomov, E. A. Salp diel vertical migration patterns across the globe: investigating size- and stage-specificity against environmental cues. Poster presentation delivered at Ocean Sciences Meeting, Online, March 2022.

Ibáñez, M. M., Gremion, G., Casado, M., Rabanal, V., Bergstedt, H., Therese Vance, G., Rosenbaum, P., **Bahl, A.** Participation of Early Career Researchers in Group Reviews of the IPCC Reports: Outcomes and Lessons Learned. Oral presentation delivered at AGU Fall Meeting, New Orleans, LA, December 2021.

Bahl, A., & Hill, S. Approaches for Ecosystem Modelling: Ecopath. Oral presentation delivered at ICED Krill Modelling Workshop, Online, May 2021.

Kristofer R. Covey, Soper, F.M, Bernardino, A.F., Pangala, S., Pagliaro, **Bahl, A.**, et al. Carbon and beyond: Interactive global change impacts on Amazon biogeochemical cycles. Poster presentation delivered at AGU Fall Meeting, San Francisco, CA, December 2020.

Bahl, A., Gnanadesikan, A., and Pradal, M.-A. Scenario and model uncertainty in ocean biogeochemical response: Isolating the role of ocean lateral mixing. Poster presentation delivered at Ocean Sciences Meeting, San Diego, CA, February 2020.

Bahl, A., Gnanadesikan, A., and Pradal, M.-A. Scenario and model uncertainty in ocean biogeochemical response: Isolating the role of ocean lateral mixing. Poster presentation delivered at AGU Fall Meeting, San Francisco, CA, December 2019.

Bahl, A., Gnanadesikan, A., and Pradal, M.-A. Understanding the Impacts of Eddy Mixing on Biogeochemical Cycles in Earth System Models. Poster presentation delivered at AGU Fall Meeting, Washington, DC, December 2018.

Pradal, M.-A., Gnanadesikan, A., and **Bahl, A.** Impacts of lateral mixing parameterization on physical and biogeochemical climate sensitivity. Oral presentation delivered at AGU Fall Meeting, Washington, DC, December 2018.

Bahl, A., Gnanadesikan, A., and Pradal, M.-A. Impact of Parametrized Eddy Mixing on the Sensitivity of Ocean Biogeochemical Cycling to Doubled CO₂ Within an Earth System Model. Oral presentation delivered at PICES 2018 International Symposium: The Climate Change Effects on the World Oceans, Washington, DC, June 2018.

Gnanadesikan, A., **Bahl, A.**, and Pradal, M.-A. Lateral mixing and ocean biogeochemical cycling. Poster presentation delivered at Ocean Mixing, Gordon Research Conference: Towards a Global Representation of the Impact of Ocean Mixing Processes on Large Scale Circulation, Andover, NH, June 2018.

Bahl, A., Gnanadesikan, A., and Pradal, M.-A. Impact of Parametrized Eddy Mixing on the Sensitivity of Ocean Biogeochemical Cycling to Doubled CO₂ Within an Earth System Model. Poster presentation delivered at AGU Ocean Sciences Meeting, Portland, OR, February 2018.

PROFESSIONAL LEARNING AND WORKSHOP PARTICIPATION

March 7 - 11, '22 Annual online workshop of the SCAR Krill Action Group
Scientific Committee on Antarctic Research (SCAR)
Online

March 9 - 10, '22 Arctic Ocean Convening
The National Geographic Society
Online

Aug 9 - 13, '21 ClimEco7 Summer School - Interdisciplinary ocean science for sustainable development
Integrated Marine Biosphere Research (IMBeR)
Online

May 17 - 20, '21	ICED Krill Workshop 2021 <i>Integrating Climate and Ecosystem Dynamics in the Southern Ocean (ICED)</i> Online
Apr 13 - Jun 4, '20	Certification: Writing in the Sciences <i>Stanford University</i> Online
Oct 23 - 25, '19	Certification: Strategies for Developing Effective Presentation Skills <i>American Management Association</i> Arlington, VA
Jun 18 - 19, '19	Monitoring Forests, Mobilizing Action <i>The Global Forest Watch Summit</i> Washington, DC
Apr 4, '19	<i>Report Launch Ecology Meets Geopolitics: Water Security in Himalayan Asia</i> <i>Atlantic Council</i> Washington, DC

PROFESSIONAL ASSOCIATIONS

Oct '20 - Present	Interdisciplinary Marine Early Career Network (IMECaN) Integrated Marine Biosphere Research (IMBeR)
Feb '20 - Present	Association of Polar Early Career Scientists (APECS)
May '19 - Present	Deep-Sea Biology Society
Sep '17 - Present	American Geophysical Union
Sep '17 - Present	The Oceanography Society
Sep '17 - Present	Young Earth System Scientists Community

EXTRACURRICULAR ACTIVITIES

Oct '21 - Present	Undergraduate Research Opportunities (REX) Mentor
Sept '21- Present	Southern Ocean Decade Working Group #2 Member
Feb '21 - Present	Integrating Climate and Ecosystem Dynamics in the Southern Ocean (ICED) Working Group Member <ul style="list-style-type: none"> • ICED Krill Workshop 2021 organizer, presenter, and moderator
Sept '20 - Sept '21	Association of Polar Early Career Scientists (APECS) Council Member <ul style="list-style-type: none"> • IASC Fellowship Review Working Group member • IPCC AR6 WGII Chair (chapter 16) and reviewer (chapter 16 and chapter 3)
Dec '20 - June '21	Climate Emergency Council
Sept '20 - March '21	Graduate Council <ul style="list-style-type: none"> • Sustainability council member • Buddy program - new graduate student

May '19 - Dec '20	Deep-Sea Biology Society -Mentoring network
Jan – May '19	National Geographic Society -Events volunteer
Oct – Dec '18	American Geophysical Union -Maryland Congressional Visit lead -Mentoring365
Oct '17 – May '18	TriBeta Biological Honors Society -Graduate mentorship
Sep – Dec '17	Johns Hopkins University -Capitol Hill volunteer
Jan – Feb '16	Tataa Kids Orphanage and Education Center -Community development and English teaching
Oct – Nov '15	WWOOF, Sweden -Farm hand
Nov '14 – Jun '15	Paws Animal Shelter -Dog walking and general office assistance