

Susanna Marie Michael

East Boothbay ME

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PROFESSIONAL APPOINTMENTS

- 2024- **Postdoctoral Research Scientist**
Bigelow Laboratory for Ocean Sciences, East Boothbay ME
Advisor: Dr. Benjamin Twining
- 2022-2024 **Lecturer**, School of Oceanography, *University of Washington, Seattle, WA*

EDUCATION

- 2022 **Ph.D. in Oceanography**
University of Washington. Advisor: Dr. Joseph Resing
Thesis: Trace metal (Al, Mn, Fe) sources and cycling at continental margin and hydrothermal interfaces in the Pacific Ocean
- 2017 **M.Sc. in Oceanography**
University of Washington. Advisor: Dr. Joseph Resing
Thesis: Constraining the Solomon Sea as a Source of Trace Metals to the Equatorial Undercurrent
- 2012 **B.A. cum laude in Chemistry (high honors) and French Studies**
Smith College (Northampton MA).

PUBLICATIONS

- In prep* **Michael, S.M.**, Graves, E., Chappell, P.D., Twining, B.S. Phytoplankton community composition along GP-17 OCE
- In prep* **Michael S.M.**, Resing, J., Baumberger, T., Buck, N., Lacan, F., Pradoux, C., Sedwick, P., Sohst., B. Examining the importance of shallow hydrothermal sources for iron delivery to the surface ocean in the Mariana back-arc
- 2023** **Michael, S.M.**, J. Crusius, A. W. Schroth, R. Campbell, and J. A. Resing. Glacial meltwater and sediment resuspension can be important sources of dissolved and total dissolvable aluminum and manganese to coastal ocean surface waters. *Limnol Oceanogr.*
- 2021** **Michael, S.**, Resing, J., Lacan, F., Buck, N., Pradoux, C., Jeandel, C.,. Constraining the Solomon Sea as a source of Al and Mn to the Equatorial Undercurrent. *Deep. Res. Part I Oceanogr. Res. Pap.* 174, 103559.
- 2021** Wang, H., Resing, J.A., Yan, Q., Buck, N.J., **Michael, S.M.**, Zhou, H., Liu, M., Walker, S.L., Yang, Q., Ji, F.. The characteristics of Fe speciation and Fe-binding ligands in the Mariana back-arc hydrothermal plumes. *Geochim. Cosmochim. Acta* 292, 24–36.

- 2019** Pham, V.Q.Q., Grenier, M., Cravatte, S., **Michael, S.**, Jacquet, S., Belhadj, M., Nachez, Y., Germineaud, C., Jeandel, C., 2019. Dissolved rare earth elements distribution in the Solomon Sea. *Chem. Geol.* 524, 11–36.
- 2017** Baker, E.T., Walker, S.L., Resing, J.A., Chadwick, W.W., Merle, S.G., Anderson, M.O., Butterfield, D.A., Buck, N.J., **Michael, S.**, 2017. The Effect of Arc Proximity on Hydrothermal Activity Along Spreading Centers: New Evidence From the Mariana Back Arc (12.7°N–18.3°N. *Geochemistry, Geophys. Geosystems* 18, 4211–4228.
- 2017** Ganachaud, A., Cravatte, S., Sprintall, J., Germineaud, C., Alberty, M.S., Jeandel, C., Eldin, G., Metzl, N., Bonnet, S., Benavides, M., Heimbürger, L.-E., Lefèvre, J., **Michael, S.**, Resing, J.A., Quéroùé, F., Sarthou, G., Rodier, M., Berthelot, H., Baurand, F., Grelet, J., Hasegawa, T., Kessler, W., Kilepak, M., Lacan, F., Privat, E., Send, U., Van Beek, P., Souhaut, M., Sonke, J.E., 2017. The Solomon Sea: its circulation, chemistry, geochemistry and biology explored during two oceanographic cruises. *Elem Sci Anth* 5, 33.

CONFERENCE PRESENTATIONS

- Michael, S.** (2026). "Phytoplankton community composition along GP17-OCE". Bigelow Science Symposium. East Boothbay, ME [Presentation]
- Michael, S.** (2025). "Cellular Quotas across biogeochemical regimes in the Southern Ocean: preliminary results from GP17-ANT". Chemical Oceanography Gordon Research Conference. Hookset, NH [Poster]
- Nuwer, M and **Michael, S.** (2023). "Does modality matter? Comparing student learning and course satisfaction in face-to-face, hybrid and online sections of an introductory oceanography course" Earth Educators Rendezvous. Pasadena, CA [Poster]
- Michael, S.** (2022) "Trace metal (Al, Mn, Fe) sources and cycling at continental margin and hydrothermal interfaces in the Pacific Ocean". Dissertation Symposium in Chemical Oceanography, Kailua-Kona, HI [Invited talk]
- Michael, S.**, Crusius, J., Schroth, A., Campbell, R., Resing, J., (2018). "Examining sediment redox control of the flux of iron to northern Gulf of Alaska surface waters" Ocean Sciences. Portland, OR [Poster].
- Michael, S.**, Resing, J., Jeandel, C., Lacan, F., (2017). "Aluminum and manganese distributions in the Solomon Sea: Results from the 2012 Pandora Cruise." GEOTRACES Summer School, Brest, France [Poster].
- Michael, S.**, Resing, J., Jeandel, C., Lacan, F., (2017). "Aluminum and manganese distributions in the Solomon Sea: Results from the 2012 Pandora Cruise." Goldschmidt. Paris, France [Talk].

Michael, S., Resing, J., Jeandel, C., Lacan, F., (2016). "Sources of trace nutrients to the Equatorial Undercurrent." Graduate Climate Conference. Pack Forest, WA [Poster].

Michael, S., Resing, J., Jeandel, C., Lacan, F., (2016). "Aluminum and manganese distributions in the Solomon Sea: Results from the 2012 Pandora Cruise." Ocean Sciences. New Orleans, LA [Poster].

AWARDS, FELLOWSHIPS, AND, SCHOLARSHIPS

2023 Environmental Faculty Fellow, University of Washington
2021 CICOES Graduate Fellowship (3 months support)
2020 McManus Teaching Award, Honorable Mention
2019 Chateaubriand Fellowship (9 months support)
2018 NSF Graduate Student Preparedness Fellowship (6 months support)
2017 Selected Participant GEOTRACES Summer School
2017 Meeting & Travel Award, UW College of the Environment
2015 NSF GRFP, Honorable Mention

SERVICE

2025-present Personnel Committee, Bigelow Laboratory for Ocean Sciences
2022-2023 Academic Affairs Committee, University of Washington
2017-2022 Seattle Society for Women in Marine Science Steering Committee
2017 Chair - Hedges Scholar Planning Committee
2016 Student representative for search committee for Chemical Oceanography faculty hire
2015 Logistics Chair for the Graduate Climate Conference
2016-2019 Student representative at faculty meetings
2016 Co-chair of the University of Washington's School of Oceanography All Student Educational Retreat

CRUISE EXPERIENCE

2026 R/V Atlantic Explorer, Bermuda, 7 days
2025 R/V Atlantic Explorer, Bermuda, 8 days
2025 R/V Bowditch (Chief Scientist), Trace metals in the Kennebec, 1 day
2025 R/V Bowditch (Chief Scientist), Trace metals in the Sheepscot, 1 day
2024 Student cruise in Puget Sound (Instructor/Chief Scientist), 2 days
2022 Student cruise in Puget Sound (Instructor/Chief Scientist), 1 day
2018 Student cruise in Puget Sound, R/V Barnes, 1 day
2016 Student cruise in Puget Sound, R/V Barnes, 1 day
2015 Hydrothermal Hunt on the Mariana Back-arc. Guam to Guam on R/V Falkor, 28 days
2014 Saipan to Guam on R/V Hi'ialakai, 10 days

TEACHING

Instructor, OCEAN 295 (Marine Organic Carbon), *Univ. of Washington (W23, Sp23, W24)*

Instructor, OCEAN 201 (Intro. To Oceanography Lab), *Univ. of Washington (Sp24)*

Instructor, OCEAN 200 (Intro. to Oceanography), *Univ. of Washington (Au22, Au23)*

Instructor, OCEAN 102 (The Changing Oceans), *Univ. of Washington (Su 24, Au23, Su23, Au22, Au21, Su21, Su20)*

Teaching Assistant, OCEAN 330(Marine Biogeochemical Cycles), *Univ. of Washington (Sp21, Sp23)*

Teaching Assistant, OCEAN 102(The Changing Oceans), *Univ. of Washington (W20)*

Teaching Assistant, OCEAN 295 (Chemistry of Marine Organic Chemistry), *Univ. of Washington (W19)*

Teaching Assistant, OCEAN 443,444,445 (Senior Research Thesis), *Univ. of Washington (Au17, W18, Sp18)*

Teaching Assistant, OCEAN 200 (Introduction to Oceanography), *Univ. of Washington (Sp17)*

Teaching Assistant, OCEAN 201(Introduction to Oceanography Laboratory), *Univ. of Washington (Sp16)*

Teaching Assistant, OCEAN 400(Chemical Oceanography), *Univ. of Washington (W16, W15)*

Undergraduate Chemistry Laboratory Teaching Assistant, Introduction to Inorganic and Physical Chemistry, *Smith College (Sp12)*

UNDERGRADUATE MENTEES

2025 Bella Brown, UMass Boston, REU

OTHER POSITIONS HELD

2012- 2014 **Laboratory and Field Technician, Ann Arbor MI and Toolik Field Station, AK**

University of Michigan Ecology and Evolutionary Biology Department
George Kling, supervisor

2012 **Summer Chemistry Field Assistant, Toolik Field Station, AK**

Marine Biological Laboratory
Ann Giblin, supervisor

2011 **REU Intern at Toolik Field Station, AK: "Ecosystem carbon dioxide exchange in fertilized and unfertilized tundra"**

Marine Biological Laboratory
Advisors: Marjan van de weg and Gaius Shaver

2010 **Ecology and Evolutionary Biology REU Intern: "The effects of phosphorous addition on the quality of dissolved organic matter"**

University of Colorado, Boulder: Institute of Arctic and Alpine Research
Advisor: Diane McKnight