

Marjorie D. Cantine

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EDUCATION

- 2015-2021 **Massachusetts Institute of Technology**; Cambridge, Massachusetts, USA.
PhD, Department of Earth, Atmospheric and Planetary Science.
- 2009-2013 **Wellesley College**; Wellesley, Massachusetts, USA.
BA, Geosciences; *Phi Beta Kappa*; *magna cum laude*. Student body president.

EMPLOYMENT

- University of Washington**; Seattle, WA, USA.
- 2023-now Assistant Professor, Department of Earth and Space Sciences. *from 1 Nov.*
Goethe-Universität Frankfurt; Frankfurt am Main, Germany.
- 2021-2023 Marie Skłodowska-Curie postdoctoral fellowship.
Massachusetts Institute of Technology; Cambridge, MA, USA.
- 2015-2021 Teaching and research assistant, PhD student.
- 2021 Research specialist.
Bank of America Merrill Lynch; New York, NY, USA.
- 2013-2014 Analyst, Investment Banking Power and Energy Group.

AWARDS and PROFESSIONAL SERVICE

Awards

- 2020 **Marie Skłodowska-Curie Actions Individual Fellowship.**
€162,806 awarded to Project CARBCHRON—Award Number 892258.
- 2017-2021 **National Defense Science and Engineering Graduate Fellowship.**
US\$153,600 + four years' tuition.
- 2017-2018 **Hugh Hampton Young Fellowship**, MIT. US\$29,790.
- 2018 **Excellence in Teaching**, MIT EAPS.
- 2017 **Graduate Woman of Excellence**, MIT.
- 2015-2016 **Presidential Fellowship**, MIT.
- 2013 **Margaret D. Thompson Award for Scholarship in the Geosciences**,
Wellesley College.
- 2012 **Sara F. Langer Award**, Wellesley College.

Professional service

- 2024 **Peer reviewer.** *Geology, Geochronology.*
Review panelist. Advancing Geochronology Science, Spaces, and Systems (AGeS3).
- 2023 **Peer reviewer.** *Earth and Planetary Science Letters, Journal of the Geological Society, Palaeogeography, Palaeoclimatology, Palaeoecology, Geochemistry.*
Review panelist. Advancing Geochronology Science, Spaces, and Systems (AGeS3). NASA Exobiology Large Scale Environmental Change and Macro-evolution.

Professional service continued

- 2022 **Peer reviewer.** *Histories, Paleooceanography and Paleoclimatology, Earth and Planetary Science Letters, Geology, Geochronology.*
- 2021 **Peer reviewer.** *Nature Communications Earth and Environment, Geology, Geological Magazine, Geochemistry, Geophysics, Geosystems, Journal of Sedimentary Research, GSA Bulletin.*
- 2021 **Session co-convener.** *Co-evolution of Earth's surface environment and biotic innovation from the Neoproterozoic through the Pre-Cambrian.* Goldschmidt.
- 2020 **Session co-chair.** *Interactions between Life, Tectonics, Climate, and Sedimentary Systems at the Neoproterozoic-Early Cambrian transition.* GSA.
- 2017-2020 **Carbonate Research Group Committee.** *SEPM.*

UW COMMITTEES, DUTIES, and SERVICE*Teaching duties*

- 2024 Sp ESS 455: Stratigraphy
- 2023 Au ESS 313: Geobiology (co-taught with Drew Gorman-Lewis)

Committees and service

- 2024 Graduate Admissions Committee
Geomorphology Search Committee
Old Oceanography Building Renovation Committee
PI in a 4-PI (LA-)ICP-MS research facility supporting users across UW

INVITED TALKS

- 2024 **Virtual Seminar in Precambrian Geology.** Weekly online seminar on Precambrian geology topics. *upcoming*
- 2023 **University of Washington, PaleoLunch, UW Biology/Burke Museum.**
University of Wisconsin, Weeks Lecture, Department of Geoscience.
Max-Planck-Institut für Chemie, Climate Geochemistry Group
City College of New York, Earth and Environmental Science Seminar Series.
University of Cambridge, Department of Earth Sciences.
Advances in the Understanding and Interpretation of Carbonates,
invited speaker on Precambrian carbonates. *August 2023.*
- 2022 **Geological Society of America Annual Meeting, Pardee Symposium**
Keynote Speaker, session on *The Proterozoic-Phanerozoic Transition: Laying the Foundation for the Modern Earth System.*
University of Washington, Department of Earth and Space Sciences
University of Minnesota, Department of Earth and Environmental Sciences
Colorado State University, Department of Geosciences
Carleton University, Department of Earth Sciences
- 2021 **Purdue University, Geology and Geophysics Group Seminar (December)**
Université de Genève, Department of Earth Sciences (December)
SUNY Stony Brook, Department of Geosciences
Wellesley College, Science Center Summer Research Program

INVITED TALKS continued

- 2021 **Carleton University**, Department of Earth Sciences
Université de Genève, DESTE Seminar, Department of Earth Sciences
 (February)
Goethe-Universität Frankfurt, Department of Geosciences
Purdue University, Geology and Geophysics Group Seminar (January)
- 2020 **University of St. Andrews**, School of Earth and Environmental Sciences
MIT, Chemical Oceanography, Geology, Geochemistry, and Geobiology Seminar
University of California Santa Barbara, Department of Earth Sciences
- 2019 **University of Kansas**, Department of Geology
- 2018 **Yale University**, Department of Geology and Geophysics, LSP-Geochemistry
 Lunch Seminar
- 2017 **Wellesley College**, Department of Geosciences

OUTREACH and PUBLIC SERVICE

- 2023-now **Abbott's Pond remediation, Port au Port West-Felix Cove-Aguathuna, Newfoundland.** *Approached by mayor of town near field site in Newfoundland to assist with remediation of euxinic pond. Collaborating with UW Tacoma faculty Jim Gawel.*
- 2019-2023 **Teaching Advisory Board.** *Freedom Summer Collegiate.*
- 2019-2022 **Teacher.** University-level month-long summer seminars for talented, first-gen-aspiring high school youth in Mississippi. *Freedom Summer Collegiate.*
- 2017-2019 **Opportunity Day.** Coordinated an annual “Career Day” visit for 20+ middle schoolers from Prospect Hill Academy to MIT EAPS.
- 2020 **MIT Cascade.** Co-instructor for 5-week Saturday enrichment class for Boston-area high schoolers.
- 2017 **STEAM Saturday.** Instructor for 4-week Saturday enrichment class for Cambridge middle schoolers at Prospect Hill Academy.

PAST and PRESENT STUDENT ADVISEES

- 2023-now Hannah R. Cothren (UW); *PhD advisor*
- 2023-now Sabrina J. H. Kainz (UW; 2023 NSF GRF recipient); *PhD advisor*
- 2023-now Tyler A. Lincoln (University of Colorado at Boulder); *PhD committee member*
- 2018-2020 Jocelyn Reahl (Wellesley College); *co-advisor and undergraduate thesis committee member*; MS, Caltech
- 2016 Andrew Cummings (MIT); *undergraduate researcher*; currently postdoc at Princeton

GRANTS

- pending **National Geographic.**
 PI. \$70,570 to UW.
Harmonizing ancient records of human and environmental change on a climate-vulnerable island.
- UW Royalty Research Fund.**
 PI. \$39,432.
Novel chronologies for human inhabitation of the Lucayan archipelago using a ubiquitous cultural archive.
- NASA FINESST.**
 PI with Future Investigator UW grad student Cothren. \$150,000 to UW.
Developing novel precise constraints on an Earth analogue for advanced life on icy moons.
- NSF EAR-SGP.**
 Co-PI. \$64,758 to UW.
Determining maximum depositional ages for nonmarine strata using emerging geochronological tools in unconventional sedimentary archives.
- NSF BCS-Archaeology.**
 Lead PI. \$228,936 to UW.
Collaborative Research: Integrating geochronology, archaeology and sedimentology to investigate a thousand years of human and environmental change in the Caribbean.
- 2023-2026 **NSF ER2.**
 Co-I, UW. \$387,995.
Project SAFER: A Holistic Approach to Identifying and Mitigating Traumatic Incidents During Field Research
- 2023 **NSF OCE.**
 Co-I, UW. \$44,246.
RAPID: Assessing the role of hurricanes and microbes in enhancing coastal sediment accumulation.
- 2021-2023 **European Research Commission.**
 PI. €162,806.
Marie Skłodowska-Curie Actions Individual Fellowship. CARBCHRON: Carbonate Boundstone as a Geochronometer.

CONFERENCE PRESENTATIONS

‡ student mentee

- 2023 Gerdes, A., Cantine, M; Eitel, S.‡ “Ancient carbonates as archives for global environmental changes during Ediacaran-Cambrian time: a geochemical perspective.” *European Geosciences Union General Assembly.*
- Cantine, M.D.;** Gerdes, A., Eitel, S.‡, Ovtcharova, Maria; Müller, Inigo. “Preliminary results from U-Pb dating and geochemical characterization of GRIND-ECT carbonate samples from Namibia.” *European Geosciences Union General Assembly.*

CONFERENCE PRESENTATIONS continued

‡ student mentee

- 2023 Rose, C., Prave, A., Baillie, I.‡, **Cantine, M.D.**, Kasemann, S., Macdonald, F., Mesli, M., Nduutepo, A., Pruss, S., Trindade, R. “Grinding through the Ediacaran-Cambrian Transition.” *European Geosciences Union General Assembly*.
- Cantine, M.D.**, Gerdes, A. “In situ characterization and dating of sedimentary carbonates: case studies, process, and progress.” *Goldschmidt*.
- Bergmann, K., Gomez-Perez, I., Anderson, N. T., **Cantine, M.D.**, Wilcots, J., Jost, A. B., Meyer, F., Mackey, T., Goldberg, S., Millikin, A. E. G. “Unraveling Geochemical Complexity in Neoproterozoic Sedimentary Successions: A Comparative Study of Svalbard and Oman.” *American Geophysical Union Fall Meeting*.
- 2022 **Cantine, M.D.**, Gerdes, A., “U-Pb and B isotope measurements using in situ LA-ICP-MS in carbonate sediments across the Proterozoic-Phanerozoic transition.” *GSA Pardee Keynote Symposium*.
- Cantine, M.D.**, Finzel, E., Gerdes, A. “What Do We Date When We Date Carbonates? A Case Study from the Cretaceous Kootenai Fm.” *American Geophysical Union Fall Meeting*.
- Cantine, M.D.**, Gerdes, A. “Facies and environmental controls on dating carbonates using LA-ICP-MS.” *European Geosciences Union General Assembly*.
- 2021 **Cantine, M.D.**, Walds, C., “What happens when we braid science and poetry? An experiment in place-based education from the Mississippi Delta.” *American Geophysical Union Fall Meeting*.
- Cantine, M.D.**, Rooney, A.D., Knoll, A.H., Bergmann, K.D., Gomez Perez, I., Baloushi, B., Gerdes, A. “Multiple methods tell time in Ediacaran Oman.” *American Geophysical Union Fall Meeting*.
- Cantine, M.D.**, Rooney, A.D., Knoll, A.H., and Bergmann, K.D., “Depositional rates in the Ediacaran Nafun Group, Oman, and the wider late Proterozoic world.” *NE Geobiology 2021*.
- 2020 **Cantine, M.D.**, Rooney, A.D., Knoll, A.H., and Bergmann, K.D., “Depositional rates in the Ediacaran Nafun Group, Oman, and the wider late Proterozoic world.” *Geological Society of America Annual Meeting*.
- Cantine, M.D.**, Rooney, A.D., Knoll, A.H., and Bergmann, K.D., “Depositional rates in the Ediacaran Nafun Group, Oman, and the wider late Proterozoic world.” *American Geophysical Union Annual Meeting*.
- Reahl, J.N.‡, **Cantine, M.D.**, Wilcots, J.K., Mackey, T.J., and Bergmann, K.D., “Revealing sediment transport histories with quartz microtextural analysis and principal component analysis (PCA).” *Geological Society of America Annual Meeting*.

CONFERENCE PRESENTATIONS continued

‡ student mentee

- 2020 Reahl, J.N.‡, **Cantine, M.D.**, Wilcots, J.K., Mackey, T.J., and Bergmann, K.D., “Revealing sediment transport histories with quartz microtextural analysis and principal component analysis (PCA).” *American Geophysical Union Annual Meeting*.
- Mackey, T., Jost, A. B., Anderson, N. T., **Cantine, M.D.**, Webb, S., Bone, S., Tosca, N., Strauss, J. V., Bergmann, K. “Redox of Neoproterozoic Snowball Earth Carbonate Depositional Environments.” *Geological Society of America Annual Meeting*.
- 2019 **Cantine, M.D.**, Rooney, A.D., Linnemann U., Hofmann, M., Albert, R., Gomez Perez, I., Baloushi, B., Gerdes, A., and Bergmann, K.D. “Geochronologic constraints on the Shuram excursion in Oman.” *American Geophysical Union Annual Meeting*.
- Reahl, J.N.‡, Bergmann, K.D., **Cantine, M.D.** “Linking sedimentary textures to Neoproterozoic climate dynamics.” *American Geophysical Union Annual Meeting*.
- Smith, B., **Cantine, M.D.**, Bergmann, K. D., Kerans, C., Ramos, E. J., Martindale, R. C. “Arid Coastal Deposits and the Phanerozoic Record of Marine Carbonate Chemistry.” *American Geophysical Union Annual Meeting*.
- Cantine, M. D.**, Cummings, A.‡, Bergmann, K.D. “Fitting the facies mosaic together: Controls on lateral heterogeneity of microbial reefs.” *American Association of Petroleum Geologists Annual Convention and Exhibition*.
- Bergmann, K., Amthor, J., **Cantine, M.D.**, Jost, A. “Geochemistry of Unusual Carbonate Facies: Is the Precambrian the Key to the Cretaceous Pre-Salt Carbonates? Part 2.” *American Association of Petroleum Geologists Annual Convention and Exhibition*.
- Bergmann, K., Boekelheide, N., Jost, A., **Cantine, M.D.**, Mackey, T. “Carbon Sequestration Through Time and Its Role as an Overlooked Driver of Earth’s Long-Term Climate History.” *American Association of Petroleum Geologists Annual Convention and Exhibition*.
- Mackey, T., Bergmann, K., Summons, R. E., Jost, A. B., **Cantine, M.D.**, Wilcots, J. “Paired biomarker and carbonate clumped isotope analyses of Neoproterozoic environments, NE Svalbard.” *The Astrobiology Science Conference*.
- 2018 **Cantine, M.D.** and Bergmann, K.D. “Insights into the rise of thrombolites from database and field.” *American Geophysical Union Annual Meeting*.
- Bergmann, K., Boekelheide, N., **Cantine, M.D.**, Jost, A. B., Mackey, T., Goldberg, S. L., Wilcots, J., Anderson, N. T. “A 1.2 Billion Year Record of Earth’s Temperature History.” *American Geophysical Union Annual Meeting*.

CONFERENCE PRESENTATIONS continued

‡ student mentee

- 2018 Mackey, T. Jost, A. B., **Cantine, M.D.**, Wilcots, J., Summons, R. E., Bergmann, K. "Paired carbonate clumped isotope and biomarker records of Neoproterozoic habitats from NE Svalbard." *American Geophysical Union Annual Meeting*.
- Wilcots, J., Gilbert, P., Sun, C., **Cantine, M.D.**, Frazier, M. J., Bergmann, K. "Neoproterozoic Fabric-retentive Dolomite at the Nanoscale." *American Geophysical Union Annual Meeting*.
- Al Rawahi, H., Gomez-Perez, I., Bergmann, K., **Cantine, M.D.**, Fonseca-Rivera, C. "Sedimentology and Isotopes Stratigraphy of the Fara Formation in North Oman Outcrops and its Relation to the South Oman Subsurface." *Seventh Arabian Plate Geology Workshop: Pre-Cambrian to Paleozoic Petroleum Systems in the Arabian Plate*.
- Grotzinger, J., Gomes, M., Lingappa, U. F., Stein, N., Trower, E., Alleon, J., Bahniuk, A. M., **Cantine, M.D.**, Grotzinger, H., Metcalfe, K. "Diverse and Spatially Extensive Microbial Mat and Ooid Sand Depositional System, Little Ambergris Cay, Turks and Caicos Islands." *American Association of Petroleum Geologists Annual Convention and Exhibition*.
- Trower, E., **Cantine, M.D.**, Gomes, M., Lingappa, U. F., O'Reilly, S., Present, T. M., Stein, N., Strauss, J., Lamb, M., Grotzinger, J. "Physical, Chemical, and Microbial Controls on Growth and Degradation of Ooids on Ambergris Shoal, Little Ambergris Cay, Turks and Caicos Islands, British Overseas Territories." *American Association of Petroleum Geologists Annual Convention and Exhibition*.
- 2017 Trower, E. J., Lamb, M. P., Grotzinger, J. P., **Cantine, M. D.**, O'Reilly, S., Fischer, W. W. "Sediment Transport Controls Ooid Growth." *American Association of Petroleum Geologists Annual Convention and Exhibition*.
- Bergmann, K. D., **Cantine, M. D.**, Knoll, A. H. "Precambrian Carbonate Platforms: A Database Approach to Querying Carbonate Deposition Through Time." *American Association of Petroleum Geologists Annual Convention and Exhibition*.
- Cantine, M.D.**, Setera, J., Mwinde, C. N., Schoene, B., Bergmann, K. "Grain size influences the detrital zircon record associated with the largest negative carbon isotope excursion in Earth history." *American Geophysical Union Fall Meeting*.
- Mackey, T., Bergmann, K., Jost, A. B., **Cantine, M.D.**, Wilcots, J. "Clumped Isotope Records of Environmental Change and Diagenesis at the Onset of the Cryogenian." *American Geophysical Union Fall Meeting*.
- Bergmann, K., **Cantine, M.D.**, Knoll, A. H. "Carbonates before Skeletons: A Database Approach." *American Geophysical Union Fall Meeting*.

CONFERENCE PRESENTATIONS continued

‡ student mentee

- 2016 Stein, N.; Quinn, D. P.; Grotzinger, J. P.; Fischer, W. W. Knoll, A. H., **Cantine, M.D.**, Gomes, M. L.; Grotzinger, H. M.; Lingappa, U.; Metcalfe, K. "UAV, DGPS, and Laser Transit Mapping of Microbial Mat Ecosystems on Little Ambergris Cay, BWI." *American Geophysical Union Fall Meeting*.
- Orzechowski, E. A., Strauss, J. V., Knoll, A. H., Fischer, W.W., **Cantine, M.D.**, Metcalfe, K.; Quinn, D. P., Stein, N., Gomes, M. L., Grotzinger, H. M. "Age and construction of Little Ambergris Cay bedrock rim, southeastern Caicos platform, British West Indies." *American Geophysical Union Fall Meeting*.
- Grotzinger, J. P., Knoll, A. H., Fischer, W. W., **Cantine, M.D.**, Gomes, M. L., Grotzinger, H. M., Lingappa, U., Metcalfe, K., O'Reilly, S., Orzechowski, E. A. "Context, Biogeochemistry, and Morphology of Diverse and Spatially Extensive Microbial Mats, Little Ambergris Cay, Turks and Caicos Islands, BWI." *American Geophysical Union Fall Meeting*.
- Gomes, M. L., Lingappa, U., Metcalfe, K., O'Reilly, S., Riedman, L. A., **Cantine, M.D.**, Ireland, B., Phillips, R., Stein, N., Orzechowski, E. A. "Linking the modern to the ancient with a comprehensive geobiological understanding of biosignature preservation in microbial mats." *American Geophysical Union Fall Meeting*.
- Trower, E., **Cantine, M.D.**, O'Reilly, S., Strauss, J. V., Gomes, M. L., Grotzinger, H. M., Grotzinger, J. P., Knoll, A. H., Lamb, M. P., Lingappa, U. "Evidence of Active Ooid Growth from Little Ambergris Cay, Turks and Caicos Islands, BWI." *American Geophysical Union Fall Meeting*.
- 2012 George, S. W., **Cantine, M.D.** and Brabander, D. J. "Geochemical leaching of alkaline batteries: implications for landfill disposal and remediation of lead contaminated compost." *Geological Society of America Fall Meeting*.

PEER-REVIEWED PUBLICATIONS

★ equal authorship; ‡ student mentee

- in review **Cantine, M.D.**, Rooney, A.D., Knoll, A.H., Gomez Perez, I., Baloushi, B., Bergmann, K.D., "New Ediacaran age constraints provide a robust temporal framework for sedimentary and biogeochemical change at the dawn of animal life."
- 2024 **Cantine, M.D.**, Orzechowski, E., Stein, N., Lincoln, T., Hibner, B., Present, T., Thorpe, M., Strauss, J., Bahniuk Rumbelsperger A.M., Knoll, A.H., Grotzinger, J., Gomes, M., Trower, E. "Rapid growth of a carbonate island over the last millennium." in press at *Sedimentology*.
- 2023 Stein, N.T., Grotzinger, J.P., Quinn, D.P., Lingappa, U.F., Present, T.M., Trower, E.J., Gomes, M.L., Orzechowski, E., **Cantine, M.D.**, Metcalfe, K.S., Fischer, W.W., Ehlmann, B.L., Strauss, J.V., Knoll, A.H., "Geomorphic and environmental controls on microbial mat fabrics on Little Ambergris Cay, Turks and Caicos." *Sedimentology* 70(6) 1915-1944.
doi: 10.1111/sed.13100

PEER-REVIEWED PUBLICATIONS continued

★ equal authorship; ‡ student mentee

- 2022 Gilbert, P.U.P.A., Bergmann, K.D., Boekelheide, N., Tambutté, S., Mass, T., Marin, F., Adkins, J., Erez, J., Gilbert, B., Knutson, V., **Cantine, M.D.**, Ortega-Hernandez, J., Knoll, A.H. “Biom mineralization: integrating mechanism and evolutionary history.” *Science Advances* 8(10) 16 pages.
doi: 10.1126/sciadv.abl9653
- 2021 **Cantine, M.D.**, Setera, J.B., VanTongeren, J. A., Mwinde, C.‡, Bergmann, K.D. “Grain size and transport biases in an Ediacaran detrital zircon record.” *Journal of Sedimentary Research*. 91(9) 913-928.
doi: 10.2110/jsr.2020.153
- Cantine, M.D.**, “Dying to know: Death during geological fieldwork.” *The Sedimentary Record* 19(3) 5-14.
doi: 10.2110/sedred.2021.3.2
- Reahl, J.N.‡, **Cantine, M.D.**, Wilcots, J., Mackey, T.J., Bergmann, K.D. “Meta-analysis of Cryogenian through modern quartz microtextures reveals sediment transport histories.” *Journal of Sedimentary Research* 91(9) 929-944.
doi: 10.2110/jsr.2020.151
- Smith, B.P., **Cantine, M.D.**, Bergmann, K.D., Ramos, E.J., Martindale, R.C., Kerans, C., “Arid coastal carbonates and the Phanerozoic record of carbonate chemistry.” *AGU Advances* 2, e2021AV000386. 15 pages.
doi: 10.1029/2021AV000386
- Present, T.M, Gomes, M.L., Trower, E.J., Stein, N.T., Lingappa, U.F., Naviaux, J., Thorpe, M.T., **Cantine, M.D.**, Fischer, W.W., Knoll, A.H., Grotzinger, J.P., “Non-lithifying microbial ecosystem dissolves peritidal lime sand.” *Nat. Commun.* 12, 3037. 8 pages.
doi: 10.1038/s41467-021-23006-1.
- 2020 Rooney, A.D.★, **Cantine, M.D.**★, Bergmann, K.D., Baloushi, B., Gomez Perez, I., Boag, T., Busch, J., Sperling, E. Strauss J.V., 2020, “Calibrating the co-evolution of Ediacaran life and environment.” *PNAS* 117(29), 16824-16830.
doi: 10.1073/pnas.2002918117
- Cantine, M.D.**, Knoll, A.H., and Bergmann, K.D. 2020, “Carbonate rocks before skeletons: a database approach.” *Earth-Science Reviews* 201 103065. 37 pages.
doi: 10.1016/j.earscirev.2019.103065
- 2018 Trower, E.J., **Cantine, M.D.**, Gomes, M.L., Grotzinger, J.P., Knoll, A.H., Lamb, M.P., Lingappa, U., O’Reilly, S.S., Present, T.M., Stein, N. and Strauss, J.V., 2018, “Active Ooid Growth Driven By Sediment Transport in a High-Energy Shoal, Little Ambergris Cay, Turks and Caicos Islands.” *Journal of Sedimentary Research* 88(9) 1132-1151.
doi: 10.2110/jsr.2018.59
- Cantine, M.D.** and Fournier, G. P., 2018, “Environmental adaptation from the origin of life to the Last Universal Common Ancestor.” *Origins of Life and Evolution of Biospheres* 48, 35-54.
doi: 10.1007/s11084-017-9542-5

TEACHING EXPERIENCE outside of UW

- 2022 **Instructor of record**, Gravity, Freedom Summer Collegiate. *Meridian Freedom Project, Meridian, Mississippi.*
- 2021 **Instructor of record**, Ways To See, Freedom Summer Collegiate. Co-taught with Calvin Walds, writer. *Online due to coronavirus pandemic.*
- 2020 **Instructor of record**, Advanced Math and Science, Freedom Summer Collegiate. Co-taught with Professor Stephanie Dick (UPenn), historian of science. *Online due to coronavirus pandemic.*
- 2019 **Instructor of record**, Searching for Extraterrestrial Life, Freedom Summer Collegiate. *Eudora, Arkansas.*
- 2019 **Teaching assistant**, Great Papers in the Earth, Atmospheric and Planetary Sciences. *MIT EAPS.*
- 2018 **Teaching assistant**, Sedimentology and Modern Carbonate Field Sedimentology *MIT EAPS; field trip to Bermuda.*
- 2017 **Teaching assistant**, Sedimentology and Phanerozoic Field Sedimentology *MIT EAPS; field trip to Death Valley.*
- 2016, 2017 **Teaching assistant**, Freshman Pre-Orientation Program *MIT EAPS; field trip to Yellowstone National Park.*

PROFESSIONAL DEVELOPMENT

- 2022 **Workshop**. Teaching Quantitative Reasoning Using Data: Project EDDIE Workshop at AGU 2022.
- Workshop**. Building Better Broader Impacts Workshop at AGU 2022.

NON-REFEREED MATERIALS REFLECTING SCHOLARLY AND CREATIVE ACTIVITIES

- 2022 “Playing it safe in field science.” EOS. Print (July 2022) and online (17 May 2022). <https://eos.org/opinions/playing-it-safe-in-field-science>
- 2021 One of my drone photos was used on the September 2021 cover of the *Journal of Sedimentary Research*. It shows the Bråvika Member in Svalbard (and me!): <https://pubs.geoscienceworld.org/jsedres/issue/91/9>