

Wilson Sauthoff (he/him)

Ph.D. Candidate, Colorado School of Mines Hydrologic Sciences & Engineering Program

Contact Information	Department of Geophysics Colorado School of Mines 1500 Illinois St. Golden, CO 80401 USA	sauthoff@mines.edu https://wsauthoff.github.io https://glaciology.mines.edu
Education	Hydrology Ph.D. (in progress, expected 2025) Data Science M.Sc. (in progress, expected 2024) Colorado School of Mines Advisor: Dr. Matthew Siegfried, (8/2020–Present) Ocean Sciences M.Sc. University of California Santa Cruz Advisors: Drs. Christina Ravelo & Matthew McCarthy, (9/2013–9/2016) Environmental Science and Management B.Sc. University of California Davis Oceanography minor, Advisor: Dr. Tessa Hill, (9/2010–6/2013)	
Peer-Reviewed Publications	Brault, E., Koch, P., McMahon, K., Broach, K., Rosenfield, A., Sauthoff, W. , Loeb, V., Arrigo, K., & Smith, W. (2018). Carbon and nitrogen isoscapes in West Antarctica reflect oceanographic transitions. <i>Marine Ecology Progress Series</i> . https://doi.org/10.3354/meps12524 Serrato Marks, G., LaVigne, M., Hill, T., Sauthoff, W. , Guilderson, T., Roark, B., Dunbar, R., & Horner, T. (2017). Reproducible Ba/Ca variations recorded by northeast Pacific bamboo corals. <i>Paleoceanography and Paleoclimatology</i> . https://doi.org/10.1002/2017PA003178 Moffitt, S., Moffitt, R., Sauthoff, W. , Hewett, K., Davis, K., & Hill, T. (2015) Paleooceanographic insights on recent oxygen minimum zone expansion: Lessons for modern oceanography. <i>PLOS ONE</i> . https://doi.org/10.1371/journal.pone.0115246	
Other Products	Snow, T., Millstein, J., Sauthoff, W. , Scheick, J., & Siegfried, M. (2023). CryoCloud response to NASA NNH23ZDA005L "Request for Information: Scientific Data and Computing Architecture to Support Open Science". Zenodo. https://doi.org/10.5281/zenodo.7662908 Snow, T., Millstein, J., Scheick, J., Sauthoff, W. , & others. (2023). CryoCloud JupyterBook (2023.01.26). Zenodo. https://doi.org/10.5281/zenodo.7576602 Siegfried, M., Schroeder, D., Sauthoff, W. , Smith, B. (2021) Investigating a large subglacial lake drainage in East Antarctica with ice-penetrating radar. <i>SEG Technical Program Expanded Abstracts</i> . https://doi.org/10.1190/segam2021-3582777.1 Ruck, K., Sheffield Guy, L., Chetty, S., French, N., Seefeldt, M., Carpenter, P., Frey, K., Griffith, P., Prior-Jones, M., Sauthoff, W. (Eds.). (2020). Polar Technology Conference 2020 Report. Arctic Research Consortium of the US (ARCUS). https://www.arcus.org/publications/31301	

Isern, A., Burtler, N., Shanhun, F., **Sauthoff, W.** (Eds.) (2019). Report on International Ross Sea Region Collaboration and Coordination Workshop. Scientific Committee on Antarctic Research. <https://www.scar.org/scar-news/pais-news/ross-sea-workshop-report/>

Sauthoff, W., Ravelo, C., McCarthy, M. (2016). Nitrogen isotopes of amino acids in marine sediment: A burgeoning tool to assess organic matter quality and changes in supplied nitrate $\delta^{15}\text{N}$. M.Sc. thesis, University of California Santa Cruz. <http://escholarship.org/uc/item/63r5v4zj>

Sauthoff, W. (2013) Gulf of Alaska and California bamboo corals: A new archive of climate change. *Explorations: The UC Davis Undergraduate Research Journal*, Vol. 15. http://explorations.ucdavis.edu/2013/sauthoff_wilson.html

- Selected Conference Presentations
- CryoSat-2/ICESat-2 integrated time series and comparison of shoreline evolution in Antarctic active subglacial lakes (poster), 2022 AGU Fall Meeting Session C008, Chicago, IL (12/2022)
- ICESat-2-extended time series of subglacial volume fluxes using time-variable shorelines of Antarctic active subglacial lakes (talk), Ice, Cloud and Land Elevation Satellite-2 Science Symposium 2022, Austin, TX (10/2022)
- Variable shorelines of Antarctic active subglacial lakes reveal large underestimates of subglacial volume fluxes (poster), 2022 GSA Connects Session T107, Denver, CO (10/2022) <https://doi.org/10.1130/abs/2022AM-383750>
- Refined time series of Antarctic active subglacial lakes: New multimission volume flux estimates using evolving shorelines (talk), 2022 WAIS Workshop, Estes Park, CO (9/2022)
- Antarctic active subglacial lake shoreline migration and novel features of ice height anomaly (talk), AGU Frontiers in Hydrology Meeting, San Juan, PR (6/2022)
- Antarctic active subglacial lake shoreline migration and novel features of ice height anomaly (talk), Spring 2022 Ice, Cloud and Land Elevation Satellite-2 Science Team Meeting, Boulder, CO (5/2022)
- Observing connected subglacial lake drainage at Slessor Glacier, East Antarctica, using ICESat-2 laser altimetry (poster), 2021 WAIS Workshop, Sterling, VA (9/2021)
- Workshop Participation
- Participant, Joint IAPSO/IACS [Commission on Ice-Ocean Interactions Online workshop](#), virtual (10/2022)
- Participant, CLIVAR [Sources, Pathways and Impacts of Fresh water in northern and southern Polar oceans and seas](#) (SPICE UP), virtual (9/2022)
- Co-organizer, International Ross Sea Region Collaboration and Coordination Workshop, Scientific Committee on Antarctic Research (SCAR) [XIII International Symposium on Antarctic Earth Sciences \(ISAES\) Conference](#), Incheon, Korea (7/2019)
- NSF Representative, [2019 Next Generation of Polar Researchers Leadership Symposium](#), Catalina, CA (5/2019)
- Awards
- 2022 WAIS Workshop Early Career Researcher Travel Grant, \$280, (9/2022)
- ESIP Request for Machine Learning Tutorials Grant (Project Partner), \$5,000, (7-12/2022)
- Mines Hydrological Science & Engineer Student Leadership Award, \$400, (7/2022)
- 2021 WAIS Workshop Early Career Researcher Travel Grant, \$651, (9/2021)
- Mines Hydrological Science & Engineer Student Leadership Award, \$220 (5/2021)
- NSF Antarctic Service Medal, (03/2017)

Graduate Student Association Travel Grant, \$288, (5/2015)
Myers Oceanographic Trust Grant, \$1100, (4/2015)
Friends of Long Marine Lab Grant, \$950, (1/2015)
PADI Foundation Grant, \$1685, (9/2013)
Provost's Undergraduate Fellowship, \$894, (12/2011)

Mentoring

Colorado School of Mines

Venezia Follingstad, B.Sc. and post-baccalaureate researcher, (2022)
Kayla Hubbard, M.Sc. student, (2021), now National Science Foundation science assistant

University of California Santa Cruz

Natalia Spritzer, Science Internship Program high school intern, (2015)
Sami Chen, undergraduate lab assistant, (2014-2015), now Ph.D. student at Stanford
Nicolette Chiem, undergraduate CalTeach intern, (2014-2015)
Linda Pineda, undergraduate researcher, (2015-2016)

Teaching
Experience

Colorado School of Mines

Teaching Assistant
Applications of Remote Sensing (Geophysics 470/570), 1/2022-5/2022

University of California Santa Cruz

Teaching Assistant
Ecology & Society (Environmental Studies 100L), 1/2016-3/2016
Microbiology (Microbiology & Environmental Toxicology 119), 9/2015-12/2015
Our Changing Planet (Oceans 80B), 9/2014-12/2014, 4/2014-6/2014

University of California Davis

Laboratory Teaching Assistant, Mathematics and Science Teaching Program for biological science laboratory (BIS 2A-CL), 1/2012-3/2012
Biological Sciences Tutor, Student Academic Success Center, 6/2011-12/2011
Instructor, Biological Sciences supplemental course (BIS 98), 4/2011-6/2011

Professional
Experience

National Science Foundation Office of Polar Programs

Alexandria, Virginia

Science Assistant, Facilitated merit-based review of scientific proposals for funding consideration; Performed proposal and award data analysis to assess trends in metrics including institution parameters, proposing researcher demographics, etc. to achieve portfolio balance and broader impacts; Wrote internal documentation surrounding funding decisions; Project management of special initiatives to increase stakeholder engagement; Executive Secretary to Executive Management Board of cross-agency management partners of the U.S. Antarctic Program, (3/2018-8/2020)

Pacific Architects & Engineers

McMurdo Station, Antarctica

Various roles, Coordinated site assessments, remediation, monitoring, and training activities at primary logistical hub and remote field camps; Ensured compliance with regulatory policies pertaining to environmental protection and waste management observing the Antarctic Treaty; Collected and analyzed environmental samples; Maintained GIS and GPS records; Authored technical reports; Ensured timely, safe, and effective passenger and courier movements at remote research station and airfields; Dispatched passenger and crew ground movements, (7/2017-2/2018)

Monterey Bay Aquarium Research Institute

Moss Landing, California

Ocean Chemistry Intern, Researched deep-sea oil leaks using laser Raman spectroscopy to model environmental fate of oil pollution and methane seeps; Coded data reduction program; Mobilized materials for fieldwork, (6-9/2013)

Sacramento Air Quality Management District

Sacramento, California

Mobile Sources Intern, Implemented incentive program oversight; Analyzed air quality surveys; Prepared technical documents including grant final reports; Organized public outreach efforts, (6/2012-6/2013)