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- 2013
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  - [5] Holt, T. O., N. F. Glasser, D. J. Quincey and M. R. Siegfried, 2013. Speedup and fracturing of George VI Ice Shelf, Antarctic Peninsula, *The Cryosphere*, **7**(3), 797–816, doi:10.5194/tc-7-797-2013.
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	drothermal vents, <i>Environmental Chemistry</i> , <b>9</b> (2), 130–138, doi:10.1071/EN11134.
2011	[1] Siegfried, M. R., R. L. Hawley and J. F. Burkhart, 2011. High-Resolution Ground-Based GPS Measurements Show Intercampaign Bias in ICESat Elevation Data Near Summit, Greenland, <i>IEEE Transactions on Geosciences and Remote Sensing</i> , <b>49</b> (10), 3393–3400, doi:10.1109/TGRS.2011.2127483.
TECHNICAL REPORTS	Smith, B., D. Hancock, K. Harbeck, L. Roberts, T. Neumann, K. Brunt, H. A. Fricker, A. Gardner, M. R. Siegfried, S. Adusumilli, B. Csathó, N. Holschuh, J. Nilsson and F. Paolo, 2021. Algorithm Theoretical Basis Document (ATBD) for Land Ice Along-Track Height Product (ATL06), Release 004, <i>NASA Goddard Space Flight Center Technical Reference</i> .
OTHER PUBLICATIONS	Siegfried, M. R., and C. D. Gustafson, 2022. Scientists in Antarctica discover a vast, salty groundwater system under the ice sheet – with implications for sea level rise. <i>The Conversation</i> , <a href="https://theconversation.com/scientists-in-antarctica-discover-a-vast-salty-groundwater-system-under-the-ice-sheet-with-implications-for-sea-level-rise-182506">https://theconversation.com/scientists-in-antarctica-discover-a-vast-salty-groundwater-system-under-the-ice-sheet-with-implications-for-sea-level-rise-182506</a> . Padman, L., and M. R. Siegfried, 2018. Ocean Tides Affect Ice Loss from Large Polar Ice Sheets, <i>EOS: Earth &amp; Space Science News</i> , <b>99</b> , doi:10.1029/2018EO092835. Fricker, H. A., F. Paolo, M. R. Siegfried, and S. Adusumilli, 2018. Short-term changes in Antarctica's ice shelves are key to predicting their long-term fate, <i>The Conversation</i> , <a href="https://theconversation.com/short-term-changes-in-antarcticas-ice-shelves-are-key-to-predicting-their-long-term-fate-95207">https://theconversation.com/short-term-changes-in-antarcticas-ice-shelves-are-key-to-predicting-their-long-term-fate-95207</a> .
DATA SETS	Siegfried, M. R., R. A. Venturelli, M. O. Patterson, W. Arnuk, T. D. Campbell, C. D. Gustafson, A. B. Michaud, B. K. Galton-Fenzi, M. B. Hausner, S. N. Holzschuh, B. Huber, K. D. Mankoff, D. M. Schroeder, P. T. Summers, S. Tyler, S. P. Carter, H. A. Fricker, D. M. Harwood, A. Leventer, B. E. Rosenheim, M. L. Skidmore, J. C. Priscu and T. S. S. Team, 2023. Data for Siegfried*, Venturelli*, et al., 2023, <i>Geology</i> , Zenodo, doi:10.5281/ZENODO.7597019. Smith, B. E., H. A. Fricker, A. Gardner, M. R. Siegfried, S. Adusumilli, B. M. Csathó, N. Holschuh, J. Nilsson, F. S. Paolo and the ICESat-2 Science Team, 2021. ATLAS/ICESat-2 L3A Land Ice Height, Version 4, NASA National Snow and Ice Data Center Distributed Active Archive Center, Boulder, Colorado USA, doi:10.5067/ATLAS/ATL06.004.
PUBLISHED SOFTWARE	Siegfried, M. R., W. Arnuk, R. A. Venturelli and M. O. Patterson, 2023. SiegVent2023-Geology code repository (Version 1.1), Zenodo, doi:10.5281/ZENODO.7605994. Siegfried, M. R., 2021. mrsiegfried/Siegfried2021-GRL: Initial release with acceptance (Version 1.0), Zenodo, doi:10.5281/ZENODO.4914107. Arendt, A., B. Smith, D. Shean, A. Steiker, Alek Petty, F. Perez, S. Henderson, F. Paolo, J. Nilsson, M. Becker, Susheel Adusumilli, D. Shapero, B. Wallin, J. Meyer, A. Schweiger, S. Dickinson, N. Hoschuh, M. R. Siegfried and T. Neumann, 2019. ICESAT-2HackWeek/ICESat2_hackweek_tutorials (Version 0.1), Zenodo, doi:10.5281/ZENODO.3360994.
EXPANDED ABSTRACTS	* indicates student or postdoctoral advisee
	[12] *Abrahams, E., T. Snow*, F. Perez and M. R. Siegfried, 2024. A Scalable Data Augmentation Strategy Enhancing Tile-Position Invariance in Small Object Segmentation for Earth Observation, <i>International Conference on Learning Representations: Machine Learning 4 Remote Sensing (ICLR: ML4RS 2024)</i> .
	[11] *Byrne, D., J. Klemm*, M. R. Siegfried, D. Castelletti, R. Michaelides* and D. M.

- Schroeder, 2024. Radar Altimetry Simulation to Identify Sub-Footprint Ice-Sheet Surface Change, *IGARSS 2024: 2024 IEEE International Geoscience and Remote Sensing Symposium*.
- [10] Medley, B., S. Bhushan, T. Black, T. Dixon, D. Felikson, A. Gardner, R. Michaelides, P. Milillo, J. Millstein\*, A. Petty, D. Shean, M. R. Siegfried, B. Smith, T. Sutterley and T. Teisberg, 2024. Cryospheric Science Activities Supporting Development of NASA's Surface Topography and Vegetation Observing System, *IGARSS 2024: 2024 IEEE International Geoscience and Remote Sensing Symposium*.
- [9] Michaelides, R. J., M. R. Siegfried, S. Batzli, J. A. Villegas Bravo, D. Losos and W. C. Straka III, 2024. Robust Wildfire Time Series Imaging with Spaceborne Interferometric Synthetic Aperture Radars, *IGARSS 2024: 2024 IEEE International Geoscience and Remote Sensing Symposium*.
- [8] \*Sauthoff, W., M. R. Siegfried and B. E. Smith, 2024. Evolving Outlines of Antarctic Active Subglacial Lakes using an Image Processing Algorithm on Gridded Altimetry Data, *IGARSS 2024: 2024 IEEE International Geoscience and Remote Sensing Symposium*.
- 2023
- [7] Bradford, J. H., M. R. Siegfried, V. Follingstad\*, K. Hughson, A. Routt, B. Schmidt, A. Kubas, E. Quartini, A. Mullen and A. Swidinsky, 2023. Mapping the internal structure Arctic pingos using ground-penetrating radar: Results from the Pingo Canadian Landmark, *Seventh International Conference on Engineering Geophysics*.
- [6] Bryant, M., E. Anderson, A. Borsa, C. Masteller, R. Michaelides\*, M. R. Siegfried and A. Young, 2023. Integrating ICESat-2 elevation observation and satellite optical imagery to measure coastal topography and retreat rates on the Alaskan Beaufort Sea coast, *IGARSS 2023: 2023 IEEE International Geoscience and Remote Sensing Symposium*.
- [5] Michalides, R. and M. R. Siegfried, 2023. Studying permafrost-wildfire interactions in the age of NISAR, *IGARSS 2023: 2023 IEEE International Geoscience and Remote Sensing Symposium*.
- 2021
- [4] Siegfried, M. R., D. M. Schroeder, W. Sauthoff\* and B. E. Smith, 2021. Investigating a large subglacial lake drainage in East Antarctica with ice-penetrating radar, *SEG Annual Meeting* (invited contribution).
- [3] \*Klemm, J. and M. R. Siegfried, 2021. Open Source Visualization for Radar Altimetry Waveforms, /textit{IEEE International Symposium on Antenna Technology and Applied Electromagnetics}.
- [2] Summers, P. T., D. M. Schroeder and M. R. Siegfried, 2021. Constraining ice sheet basal sliding and horizontal velocity profiles using a stationary phase sensitive radar sounder, *IGARSS 2021: 2021 IEEE International Geoscience and Remote Sensing Symposium*.
- 2020
- [1] Bienert, N., D. M. Schroeder, S. T. Peters and M. R. Siegfried, 2020. Processing-based synchronization approach for bistatic glacial tomography, *IGARSS 2020: 2020 IEEE International Geoscience and Remote Sensing Symposium*.  
*Winner of the IEEE GRSS Symposium Prize Paper Award*

**MENTORING****Postdoctoral Scholars**

Shane Grigsby, 2019–2021

(now: *Research & Development Scientist, National Geospatial Intelligence Agency*)

Roger Michaelides, 2020–2022

(now: *Asst. Professor, Washington University in St. Louis*)

Tasha Snow, 2021–2024

(now: *Asst. Researcher, NASA Goddard/U. Maryland*)

Benjamin Hills, 2023–present

Joanna Millstein, 2023–present

**Graduate Students**

Jared Klemm (PhD), Geophysics, 2020–2021  
*(post Mines: Software Engineer II, Atmospheric and Environmental Research)*  
Kayla Hubbard (MS-NT), Hydrologic Science & Engineering, 2020–2021  
*(post Mines: Science Assistant, Arctic Sciences Section, National Science Foundation)*  
Elena Savidge (PhD), Geophysics, 2020–2024  
Wilson Sauthoff (PhD), Hydrologic Science & Engineering, 2020–present  
Hannah Verboncoeur (PhD), Geophysics, 2021–present  
Bailey Mullett (MS-NT), Hydrologic Science & Engineering, 2022–2024  
Gabriel Thomas (MS), Hydrologic Science & Engineering, 2022–2024  
*co-advised with Kamini Singha*  
Rachel Willis(PhD), Geophysics, 2023–present  
Zachary Katz (PhD), Geophysics, 2023–present  
Samara Omar (PhD), Geophysics, 2024–present  
*co-advised with Jeff Shragge*  
Rohaiz Haris, Geophysics, 2024–present  
Marianna Marquardt, Geophysics, 2024–present

### **Undergraduate Research**

Matt Oleszko, Geophysics, 2019–2021  
*(post-Mines step: Radar Processing Engineer, The Aerospace Corporation)*  
Anna Valentine, Geophysics, 2020–2021  
*(post-Mines step: PhD student at Dartmouth College)*  
Becca Prentice, Geophysics, 2020–2022  
*(post-Mines step: PhD student at Stanford University)*  
Stephanie Holzschuh, Applied Math and Statistics, 2020–2021  
*(post-Mines step: Data Engineer at Chevron)*  
Michael Field, Geophysics, 2021–2022  
*(post-Mines step: PhD student at University of Florida)*  
Cash Koning, Geophysics, 2020–2023  
*(post-Mines step: Polar Engineer, Earthscope Consortium)*  
Venezia Follingstad, Geophysics, 2021–2023  
*(post-Mines step: PhD student at University of Oregon)*  
Ashleigh Miller, Geophysics, 2022–2023  
*(post-Mines step: PhD student at Georgia Tech)*  
Mia Jungman, Geophysics, 2023–2024  
Duncan Byrne, Geophysics, 2023–present  
Anastasia Horne, Applied Math & Statistics, 2023–present  
Jack Logan, Geophysics, 2024–present  
Lucas Holt, Geophysics, 2024–present

### **Senior Design**

Hannah Haugen, 2021 *(post-Mines: M.S. student at U. Arizona)*  
Bailey Mullett, 2022 *(post-Mines: M.S. student at Colorado School of Mines)*  
Venezia Follingstad, 2022 *(post-Mines: PhD student at U. Oregon)*  
Cash Koning, 2022 *(post-Mines: Polar Engineer, Earthscope Cosortium)*  
Dawn Lipfert, 2024

### **Visiting Students**

Emma Pearce (PhD), University of Leeds, 2019  
Joanna Millstein (PhD), MIT, 2021–2023  
Ellie Abrahams (PhD), University of California Berkeley, 2022  
Eojin Lee (UG), Columbia University, 2022–2023  
Sawyer Kaarto (UG), Red Rocks Community College, 2022

### **Dissertation Committee Membership**

Jason Drebber (2024–present) Mines, Department of Geology & Geological Engineering  
Kate Huelse (2024–present) Mines, Department of Civil & Environmental Engineering

Ellie Longar (2024–present) Mines, Department of Geology & Geological Engineering  
Ellie Miller (2024–present) Mines, Department of Geology & Geological Engineering  
Isabelle Peter (2024–present) Mines, Department of Civil & Environmental Engineering  
Nicholas Dorogy (2023–present) Mines, Department of Geophysics  
Ari Koshkin (2023–present) Mines, Hydrologic Science & Engineering  
Ahmad Tourei (2023–present) Mines, Hydrologic Science & Engineering  
Melody Zhang (2021–present) Mines, Department of Geology & Geological Engineering  
Devon Dunmire (2020–2022) U. Colorado Boulder, Atmospheric & Ocean Sciences  
Chloe Gustafson (2020) Columbia U., Lamont-Doherty Earth Observatory

**Masters Thesis Committee Membership**

Rishi Banerjee (2023–2024) U. Manitoba, Earth Observation Science

**TEACHING EXPERIENCE**

**Colorado School of Mines**, Golden, CO

*Instructor of Record*

GPGN573: Polar Cryosphere in the Earth System	Fall 2024
GPGN486: Geophysics Field Camp	Summer 2024
GPGN470/570: Applications of Remote Sensing	Spring 2024
CSCI303: Data Science	Spring 2024
GPGN486: Geophysics Field Camp	Summer 2023
GPGN470/570: Applications of Remote Sensing	Spring 2023
GPGN598b: Polar Cryosphere in the Earth System	Fall 2022
GPGN486: Geophysics Field Camp	Summer 2022
GPGN470/570: Applications of Remote Sensing	Spring 2022
GPGN599: Ice Dynamics at Whillans Ice Stream	Spring 2022
GPGN470/570: Applications of Remote Sensing	Spring 2021
GPGN101: Geophysics & Society	Spring 2021
GPGN599: Antarctic groundwater modeling	Spring 2021
GPGN470/570: Applications of Remote Sensing	Spring 2020
GPGN101: Geophysics & Society	Spring 2020
GPGN498A/C: Geophysical Remote Sensing	Spring 2019

*Co-Instructor*

GEGN584: Field Methods in Hydrology	Fall 2023
GEGN584: Field Methods in Hydrology	Fall 2022
GPGN498: Electrical & Electromagnetic Methods & Applications	Spring 2022
GPGN486: Geophysics Field Camp	Summer 2021
GPGN486: Geophysics Field Camp	Summer 2019
Cryospheric Science with ICESat-2 Hackweek 2019, U. Washington	July 2019

**Scripps Institution of Oceanography**, La Jolla, CA

*Co-Instructor*

SIO115: Ice and the Climate System	Winter 2017
GMT Workshop for geodynamics REU students	June 2016

*Teaching Assistant*

Remote Sensing	Spring 2013
Instructors: Dr. David Sandwell, Dr. Helen Fricker	

**Dartmouth College**, Hanover, NH

*Teaching Assistant*

Dartmouth College Field Program	Fall 2009
<i>Glaciology, Quaternary Geology, Structure and Geologic Mapping</i>	
Instructors: Dr. Bob Hawley, Dr. Erich Osterberg, Dr. Meredith Kelly	

	Ecological Agriculture	Summer 2009
	Instructors: Dr. Jill Mikucki, Dr. Sarah Smith	
	Glaciology	Spring 2009
	Instructor: Dr. Robert Hawley	
	Polar Geobiology	Fall 2009
	Instructor: Dr. Jill Mikucki	
	Introduction to Computer Science	Spring 2006
	Instructor: Dr. Thomas Cormen	
	<i>Laboratory Teaching Assistant</i>	
	Mineralogy	Summer 2007
	Instructor: Dr. Ed Meyer	
	<i>Grader</i>	
	Differential Equations	Winter 2008
INVITED TALKS	Big Data, meet Long Data: Examining decadal-scale variability of ice-ocean-freshwater processes in Antarctica	
	<i>Mines Research Council Seminar</i>	13 Mar. 2024
	Big Data, meet Long Data: Examining decadal-scale variability of ice-ocean-freshwater processes in Antarctica	
	<i>Caltech Division of Geological and Planetary Sciences Seminar</i>	4 Mar. 2024
	Centering community at scientific meetings: 30 years of the West Antarctic Ice Sheet Workshop	
	<i>AGU Fall Meeting 2023</i>	11 Dec. 2023
	Cryosphere@Mines	
	<i>Finnish Ambassador Visit to Colorado School of Mines</i>	13 Jun. 2023
	Subglacial Secrets: What drilling holes through the Antarctic ice sheet can teach us about the past, present, and future of ice	
	<i>Osher Lifelong Learning Institute, University of Denver</i>	4 May 2023
	Source to sink: Tracing freshwater beneath the Antarctic ice sheet	
	<i>Colorado School of Mines Department of Geophysics Heiland Lecture</i>	7 Mar. 2023
	Technology at the coast: Probing for ice-water-ocean-Earth processes	
	<i>National Academies's Future Directions for Southern Ocean and Antarctic Nearshore and Coastal Research Community Workshop</i>	9 Feb. 2023
	Glaciology at Mines	
	<i>Colorado School of Mines Student Society of Geophysicists</i>	16 Sep. 2022
	Glaciology at Mines	
	<i>Tulane University Research Experiences for Undergraduates</i>	15 Jul. 2022
	Twelve years of exploring subglacial Antarctica	
	<i>Dartmouth College Journeys</i>	18 Jun. 2022
	Process2Paleo: Connecting modern observations to the geologic record to explore the life and death of a subglacial lake	
	<i>Scripps Polar Hour</i>	28 Oct. 2021
	Slippery when wet: Exploring the hydrosphere beneath the Antarctic ice sheet	
	<i>Colorado State Antarctic Lecture Series</i>	19 Oct. 2021
	Glaciology data volumes and data rates in Antarctica	
	<i>2021 Antarctic Subsea Cable Workshop</i>	28 Jun. 2021
	What lies beneath: Exploring the hydrosphere beneath the Antarctic ice sheet	
	<i>Delaware County Institute of Science</i>	8 Feb. 2021
	(Seminar on SALSA subglacial lake results)	
	<i>British Antarctic Survey</i>	Jun. 2020
	<b>[seminar canceled due to COVID19]</b>	
	(Seminar on ICESat-2 results)	

<i>Newcastle University</i>	Jun. 2020
<b>[fellowship delayed to COVID19; seminar canceled]</b>	
(Seminar declined due to COVID)	
<i>Stanford Geophysics Seminar</i>	4 Jun. 2020
Antarctica at Depth: New observations of subglacial water beneath ice streams	
<i>CU Boulder INSTAAR Noon Seminar</i>	16 Mar. 2020
<b>[canceled due to COVID19]</b>	
U.S. work int he Ross Sea Sector	
<i>International Ross Sea Region Collaboration Workshop, Korea</i>	21 Jul. 2019
Antarctica at Depth: Drilling for Subglacial Access	
<i>U.S. Ice Drilling Program's School of Ice</i>	24 June 2019
SALSA – A Field Debrief	
<i>Stanford University Cryospheric Scientists</i>	12 Feb. 2019
Slippery When Wet: Dynamic subglacial hydrology and the Antarctic ice sheet	
<i>Department of Geosciences Research Seminar, Boise State University</i>	26 Apr. 2018
Building a “Long Data” perspective to examine decadal-scale variability in Antarctica	
<i>Geophysics Seminar, Colorado School of Mines</i>	4 Apr. 2018
Deep, Dark, and Wet: Dynamic subglacial hydrology in Antarctica	
<i>Earth &amp; Planetary Science Seminar, Washington University in St. Louis</i>	1 Feb. 2018
Piecing together a “Long Data” perspective to examine Antarctic ice-sheet variability	
<i>Earth and Climate Seminar, University of Maine</i>	25 Oct. 2017
Piecing together a “Long Data” perspective in Antarctica to understand ice-sheet variability	
<i>SIO Research Seminar, Scripps Institution of Oceanography</i>	31 Aug. 2017
Subglacial hydrology, basal processes, and velocity transients in Antarctica	
<i>Ice Sheet System Model Workshop</i>	23 Jun. 2016
Antarctic subglacial hydrology: A review	
<i>IDPO Subglacial Access Working Group Workshop</i>	21 May 2016
Episodic hydrology, episodic ice streams: Unraveling the impact of active subglacial lakes in Antarctica	
<i>Earth Section Seminar, University of California, Santa Cruz</i>	10 May 2016
Unraveling the impact of dynamic subglacial lake drainage in Antarctic	
<i>Geophysics Seminar, Scripps Institution of Oceanography</i>	22 Apr. 2016
Planes, penguins, and cookies: Scientific outreach from Antarctica	
<i>GPS and the Cyrosphere, 2016 UNAVCO Science Workshop</i>	29 Mar. 2016
Dynamic subglacial hydrology in Antarctica: timescales, evolution, and impacts	
<i>Geophysics Seminar, Stanford University</i>	1 Mar. 2016
Extending the episodic hydrology record across Antarctica	
<i>West Antarctic Ice Sheet Workshop</i>	19 Sep. 2015
Peering under the ice to the Antarctic Slip ‘n’ Slide	
<i>UCSD Extension: Environmental Leadership &amp; Sustainability</i>	06 Jul. 2015
Investigating coupled subglacial hydrologic and ice dynamic evolution using ground- and satellite-based observations	
<i>Center for Climate Sciences Research Seminar, NASA-JPL</i>	19 Jun. 2015
Using CryoSat-2 to retrieve dynamic surface changes (& observations of stick-slip motion)	
<i>IGPP Geodesy Seminar, Scripps Institution of Oceanography</i>	22 Apr. 2015
A decade of progress observing and modeling Antarctic subglacial water systems	
<i>Subglacial Antarctic lake exploration: first results and future plans, The Royal Society /H. Fricker invited; M.R.S. presented/</i>	30 Mar. 2015
Understanding the Antarctic Slip ‘n’ Slide	
<i>Scripps Donor Brunch, Scripps Institution of Oceanography</i>	1 Mar. 2015
Highlights and reflections on The Workshop and beyond	
<i>CMBC Brown Bag, Scripps Institution of Oceanography</i>	3 Jun. 2014
Instability of the Amundsen Sea Embayment	

<i>Climate Journal Club, Scripps Institution of Oceanography</i>	22 May 2014
WISSARD: Progress, Pictures, and Prospects	
<i>Scripps Polar Seminar, Scripps Institution of Oceanography</i>	4 Jun. 2013
GLAS accuracy and elevation change at Summit, Greenland	
<i>Geolunch Brown Bag Series, Dartmouth College</i>	11 May 2010

- PROFESSIONAL SERVICE**
- Committee Service**
- NASA SWOT Mission, Science Team, Member, 2024–present
  - NASA Surface Topography and Vegetation Mission Incubation, Science Team, 2023–present
  - Ice Drilling Program Science Advisory Board, Member, 2023–present
  - NASA ICESat-2 Mission, Science Team, Member, 2021–present
  - IRIS/UNAVCO, Polar Science Technology, Co-Chair, 2021–present
  - IRIS/UNAVCO, Polar Science Technology Committee, Member, 2018–2020
  - NASA IceBridge Mission, Science Team, Member, 2017–2020
  - American Meteorological Society Committee on Polar Meteorology and Oceanography, Member, Jan. 2017–2020
  - OpenAltimetry User Working Group, Member, Jun. 2017–present
  - NASA ICESat-2 Science Definition Team, Participant, 2011–2020
- Editorial Service**
- Scientific Editor, *Journal of Glaciology*, 2019–present
  - Section Editor for Cryosphere, *Encyclopedia of Ocean Sciences, 3rd Ed.*
- Referee Service**
- Journals: *Nature*, *Nature Geoscience*, *Nature Communications*, *Geophysical Research Letters*, *Journal of Glaciology*, *Annals of Glaciology*, *The Cryosphere*, *IEEE Transactions on Geoscience and Remote Sensing*, *IEEE Geoscience and Remote Sensing Letters*, *Remote Sensing of Environment*, *International Journal of Remote Sensing*, *Journal of Applied Remote Sensing*
  - Proposals: *NASA Earth Science* (panel member, *ad hoc*), *NASA Earth Science Data Systems* (panel member), *NASA Planetary Science* (panel member), *NASA Science Mission Directorate* (panel member), *NSF Antarctic Sciences* (*ad hoc*), *Royal Society of New Zealand* (*ad hoc*), *UK Natural Environment Research Council* (*ad hoc*), *Netherlands Space Office* (*ad hoc*)
- Conference Service**
- Organizing Committee: *West Antarctic Ice Sheet Workshop*, 2019–present.
  - Local Organizing Committee: *International Symposium on Five Decades of Radioglaciology* (International Glaciological Society, Stanford, CA, 24–28 Jun. 2019); *International Symposium on Interactions of Ice Sheet and Glaciers with the Ocean* (IGS/FRISP, La Jolla, CA, 10–15 Jul. 2016); *Ice Sheet System Model Workshop* (JPL/ NASA, La Jolla, CA, May 2016), *Scripps Student Symposium* (SIO, La Jolla, CA, 24 Sep. 2015); *ICESat-2 Science Definition Team Meeting* (NASA, La Jolla, CA, 24–25 Feb. 2015); *Sea Level Change Team PI Meeting* (NASA, La Jolla, CA, 14–16 Oct. 2014), *West Antarctic Ice Sheet Workshop* (NSF/NASA, Julian, CA, 24–27 Sep. 2014); *International Symposium on Interactions of Ice Sheet and Glaciers with the Ocean* (IGS/FRISP, La Jolla, CA 5–10 Jun. 2011)
  - Session Chair: *Archives and Observations From Sub-Ice Environments* (AGU Fall Meeting 2021, 2022, 2023); *Sub-Ice-Sheet and Sub-Ice-Shelf Environments: Bridging the Gap Between Modern Observations and Geologic Records* (AGU Fall Meeting 2019, 2020); *Cryosphere/Sea-Level* (2018 UNAVCO Science Workshop); *Advances in understanding processes at the beds of glaciers and ice sheets* (AGU Fall Meeting 2015, 2016, 2017); *IgniteIGS—Early career perspectives on the future of ice-ocean research* (IGS La Jolla 2016); *Greenland Run-off* (IGS La Jolla 2016)
  - Judging: *Flash Freeze Cryosphere Innovation Award for Students* (AGU Fall Meeting

2017); *Outstanding Student Presentation Award* (AGU Fall Meeting 2017)

### White Papers

- *CryoCloud: Accelerating Discovery for NASA Cryosphere Communities with Open-Cloud Infrastructure*, submitted to NASA NNH23ZDA005L: Request for Information: Scientific Data and Computing Architecture to Support Open Science, 2023. [available [here](#)]
- *2021 Antarctic Subsea Cable Workshop Report: High-Speed Connectivity Needs to Advance US Antarctic Science*, submitted to National Science Foundation Office of Polar Programs, 2021.
- *Dive, Dive, Dive: Accessing the Subsurface of Ocean Worlds*, submitted to the NASA Planetary Science Decadal Survey, 2020.
- *Early Career Community Vision For Future Magnetotelluric Facility*, submitted to the National Science Foundation in preparation for a competition for a future unified geophysical facility, 2020.
- *An Early Career Investigator Community Vision for the Future NSF Geophysical Facility: Instrumentation Services Needs*, submitted to the National Science Foundation in preparation for a competition for a future unified geophysical facility, 2020.
- *Assessment of East Antarctic Ice Sheet sensitivity to warming and its potential for contributions to sea level rise*, submitted to U.S. Ice Drilling Program Subglacial Access Working Group, 2019.
- *Access Drilling Priorities in the Ross Ice Shelf Region*, submitted to U.S. Ice Drilling Program Subglacial Access Working Group, 2019.
- *How much, how fast? A decadal science plan quantifying the rate of change of the West Antarctic Ice Sheet now and in the future*, submitted to NSF Office of Polar Programs, 2016.

UNIVERSITY  
SERVICE

### Colorado School of Mines

- Mines Geophysics Undergraduate Advisory Committee, 2022–present  
Mines Geophysics Field Camp Director, 2021–present  
Mines Geophysics ReImagine Committee, 2021–present  
Mines Geophysics Safety Committee, 2021–present  
Geophysics GP100@100 Fundraising , 2021–present  
Geophysics Diversity, Inclusion, & Access Committee, committee chair, 2019–present  
Mines Diversity Council, 2019–present  
Mines Field Session Compensation Task Force, 2022  
Geophysics Graduate Advisory Committee, member, 2019–2022  
Faculty Search Committee: Computational Science & Data Analytics Cluster, 2020–21  
    Applied Data Science & Machine Learning, subcommittee chair  
    Computation Hydrology, subcommittee member  
#idigmines, department representative, 2019–2020  
Faculty Search Committee: Geophysical Data Science, 2019–2020

### Stanford University

- Postdoctoral Scholar Committee for School of Earth Strategic Plan, member, 2017

### Scripps Institution of Oceanography

- Leadership Committee for Peer Mentor Program, founding student member, 2014–2016  
Scripps Polar Seminar, lead organizer, 2013–2016  
Scripps Earth Section Seminar, co-organizer 2012–2013

### Dartmouth College

- Faculty Search Committee: Geomorphology, student representative, 2008  
Faculty Search Committee: Remote Sensing student representative, 2007

SIGNIFICANT FIELD EXPERIENCE	Pingo Canadian Landmark, Surface Geophysics <i>Mines Lead</i> Alaskan North Slope, Surface Geophysics <i>Mines Lead</i> Whillans Ice Plain, West Antarctica, Surface Geophysics <i>Expedition Lead, Field Medic</i> Greenland, Airborne Geophysics (Operation IceBridge) <i>Mission Science Team member visit</i> Whillans Ice Plain, West Antarctica, Surface Geophysics <i>Expedition Lead, Field Medic</i> Whillans Ice Plain, West Antarctica, Surface Geophysics <i>Expedition Lead, Field Medic</i> Whillans Ice Plain, West Antarctica, Surface Geophysics <i>Expedition Lead, Field Medic</i> Ross Ice Shelf, Antarctica, Airborne Geophysics <i>Flight Scientist, Data Engineer</i> Whillans Ice Plain, West Antarctica, Surface Geophysics <i>Expedition Lead, Field Medic</i> Whillans Ice Plain, West Antarctica, Surface Geophysics <i>GPS Team Leader, Field Medic</i> Whillans Ice Plain, West Antarctica, Surface Geophysics <i>Surface Geophysics Team Leader, Field Medic</i> Whillans Ice Plain, West Antarctica, Surface Geophysics Northern New Mexico, Southern Colorado, Geology and Geomorphology <i>Field Trip Organizer and Leader</i> Cherryfield, Maine, Fluvial Geomorphology & Riparian Habitat Surveying Banff National Park, Alberta, Canada, Glaciology Montana, Idaho, Eastern Washington, Geology Ischia Island, Italy, in situ Geochemical Analysis Puerto Rico, Soil and Water Sampling Western United States, Dartmouth Earth Sciences Field Camp Hawaii, Volcanology and Remote Sensing	2023 2021 2019–2020 2019 2018–2019 2017–2018 2016–2017 2015 2014–2015 2013–2014 2012–2013 2011–2012 2010 2009 2008 2008 2008 2007 2006 2006
HONORS AND AWARDS	<p><b>Colorado School of Mines</b></p> <ul style="list-style-type: none"> <li>Diversity Progress Report President's Choice Award, 2023</li> <li>Mines Research Council's Excellence in Research Award (Junior Faculty), 2022–2023</li> <li>Mines Earth &amp; Society Programs Outstanding Assistant Professor Award, 2022–2023</li> <li>University Public Policy Fellow, inaugural cohort, 2022–2023</li> <li>Outstanding Mines Faculty Award, 2021–2022</li> <li>Department of Geophysics T.K. Young Geophysics Leadership Award, 2021</li> </ul> <p><b>National Science Foundation</b></p> <ul style="list-style-type: none"> <li>NSF CAREER Award recipient, 2022</li> <li>Mentor for NSF Graduate Research Fellowship Program recipient (H. Verboncoeur), 2022</li> </ul> <p><b>National Aeronautics and Space Administration</b></p> <ul style="list-style-type: none"> <li>Robert H. Goddard Award as part of the Operation IceBridge Science Team, 2020</li> <li>Group Achievement Award as part of the ICESat-2 Mission Science Team, 2020</li> </ul> <p><b>National Sciences and Engineering Research Council of Canada</b></p> <ul style="list-style-type: none"> <li>Mentor for NSERC Graduate Scholarship–Doctoral Recipient (E. Savidge), 2021</li> </ul> <p><b>American Geophysical Union</b></p> <ul style="list-style-type: none"> <li>Editors' Citation for Excellence in Refereeing, Geophysical Research Letters, 2019</li> </ul> <p><b>West Antarctic Ice Sheet Workshop</b></p> <ul style="list-style-type: none"> <li>Mentor for Best Student Presentation recipient (H. Verboncoeur), 2021</li> <li>Best Student Presentation recipient, 2013</li> </ul>	

**Scripps Institution of Oceanography**

Student Video Challenge award winner, 2014

Director's Cabinet Quarterly Meeting invited presenter, May 2014

**Pontifical Academy of Sciences/Pontifical Academy of Social Sciences***Sustainable Humanity, Sustainable Nature: Our Responsibility*

Joint Workshop invited observer, May 2014

**United States Congress**

Antarctic Service Medal recipient, 2012

**Dartmouth College**

NASA Space Grant Graduate Student Award, 2010

Assistant Curator for Dana Collection of Minerals, 2007-2008

PROFESSIONAL American Geophysical Union, 2008–present

MEMBERSHIPS International Glaciological Society, 2010–present

Society for Advancement of Chicanos/Hispanics and Native Americans in Science

2019–present

Institute of Electrical and Electronics Engineers, 2020–present

American Meteorological Society, 2017–2019

Sigma Xi, 2023–present

## CONFERENCE

## ABSTRACTS

\* indicates student or postdoctoral advisee

† indicates M.R.S. presenting author

‡ indicates contributed equally as co-first author

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Education, *AGU Fall Meeting*.

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- [213] \*Sauthoff, W., M. R. Siegfried, B. E. Smith and R. Venturelli, 2023. Altimetry-based, surface-deformation delineation algorithm reveals tens of new active subglacial lake candidates across Antarctica, *AGU Fall Meeting*.
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- [211] Schroeder, D. M. and M. R. Siegfried, 2023. Enabling Subglacial Geodesy Through High-Precision Radar Sounding and GNSS Time Series Observations, *AGU Fall Meeting*.
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- [209] Smith, B. E., B. Medley, T. C. Sutterley, N. Holschuh, M. R. Siegfried and T. Neumann, 2023. Mass balance of Antarctica and Greenland from two decades of laser-altimetry measurements, *AGU Fall Meeting*.
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- [178] \*Verboncoeur, H., M. R. Siegfried, P. Winberry, N. Holschuh, A. Tarzona, W. Chu and D. Schroeder, 2022. Leveraging Multidecadal Remote Sensing Data to Evaluate Interactions Between Century-Scale Ice-Dynamics and the Local Evolution of Crary Ice Rise, *AGU Fall Meeting*.
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- [163] \*Snow, T., A. Wåhlin, B. Queste, G. Bortolotto, L. Boehme, E. Savidge\*, E. Abrahams, M. R. Siegfried and W. Abdalati, 2022. Persistent polynya variability infers basal channel outflow at the Eastern Thwaites Ice Shelf, *International Symposium on Ice, Snow and Water in a Warming World*.
- [162] \*Snow, T., M. Field\*, E. Abrahams, F. Sapienza, W. Zheng, E. Savidge\*, F. P. J. Taylor, W. Abdalati, T. Scambos and M. R. Siegfried, 2022. Single channel and split-window SSTs from Landsat in Antarctica, *GHRSST23 International Science Team Meeting*.
- [161] Bradford, J. H., M. R. Siegfried, R. Michaelides\*, B. Schmidt, K. Hughson, H. Sizemore

- and A. Swidinsky, 2022. Detailed mapping of the internal structure of Arctic pingos using ground-penetrating radar, *19th International Conference on Ground Penetrating Radar*.
- [160] \*Hubbard, K. A., M. R. Siegfried, W. Sauthoff\* and B. Dugan, 2022. Integrating visual imagery and modeling to assess groundwater connectivity in Antarctica's Taylor Valley, *AGU Frontiers in Hydrology Meeting*.
- [159] \*Sauthoff, W., M. R. Siegfried and B. E. Smith, 2022. Antarctic subglacial lake shoreline migration and variability in response to fill-drain cycles, *AGU Frontiers in Hydrology Meeting*.
- [158] Siegfried†, M. R., R. A. Venturelli†, M. O. Patterson, W. Arnuk, T. Campbell, C. D. Gustafson, A. Michaud, B. Galton-Fenzi, M. B. Hausner, S. N. Holzschuh\*, B. Huber, K. Mankoff, D. M. Schroeder, P. Summers, S. Tyler, S. P. Carter, H. A. Fricker, D. Harwood, A. Leventer, B. E. Rosenheim, M. Skidmore, J. C. Priscu and the SALSA Science Team, 2022. The Life and Death of a Subglacial Lake in West Antarctica: A Process-to-Paleo Perspective, *AGU Frontiers in Hydrology Meeting*.
- [157] Roth, D., M. Zhang, V. Sahakian, J. Marshall, G. Jin, A. Titov, M. R. Siegfried, C. Masteller and H. Jacobson, 2022. Bridging the data gap: seismo-acoustic advances from ridgelines to rivers, *European Geosciences Union General Assembly*.
- [156] Vick-Majors, T. J., C. L. Davis, B. C. Christner, W. Li, J. E. Dore, M. Tranter, J. Barker, M. R. Siegfried, M. L. Skidmore, , J. C. Priscu and the SALSA Science Team, 2022. Physiochemical drivers of microbial ecosystems in Antarctic subglacial aquatic environments, *Joint Aquatic Science Meeting*.
- [155] Bradford, J. H., M. R. Siegfried, R. Michaelides\*, B. Schmidt, K. Hughson, H. Sizemore and A. Swidinsky, 2022. Detailed mapping of the internal structure of Arctic pingos using ground-penetrating radar, *Polar Radar Science and Technology Conference*.
- [154] Pérez, F., E. Sundell, Y. Panda, E. Abrahams, A. Azari, S. Grigsby, C. Holdgraf, F. Sapienza, M. R. Siegfried, T. Snow\*, J. Taylor and W. Zheng, 2022. Keeping your head in the clouds: reproducible, collaborative science with open cloud infrastructure, *EarthCube Annual Meeting*.
- [153] Zheng, W., C. Holdgraf, F. Pérez, E. Sundell, M. R. Siegfried, T. Snow\*, S. Grigsby, F. Sapienza, J. Taylor and the Executable Books Community, 2022. Let supplemental material be FAIR: using narrative and reusable Jupyter Book to complement your journal paper, *EarthCube Annual Meeting*.
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- [152] Siegfried‡, M. R., R. A. Venturelli‡, M. O. Patterson, W. Arnuk, T. Campbell, C. D. Gustafson, A. B. Michaud, B. K. Galton-Fenzi, M. B. Hausner, S. N. Holzschuh\*, B. Huber, K. Mankoff, D. M. Schroeder, P. Summers, S. Tyler, S. P. Carter, H. A. Fricker, D. Harwood, A. Leventer, B. E. Rosenheim, M. Skidmore, J. C. Priscu and the SALSA Science Team, 2021. The life and death of a subglacial lake in West Antarctica, *AGU Fall Meeting*.
- [151] \*Michaelides, R. J., M. R. Siegfried, J. Lovekin, K. Berry, B. Dugan and D. L. Roth, 2021. Discrimination of Active and Inactive Burn Areas in the 2020 Cameron Peak Fire from Interferometric Synthetic Aperture Radar (InSAR) Time Series, *AGU Fall Meeting*.
- [150] \*Savidge, E., T. M. Snow\*, M. R. Siegfried, L. Boehme, G. Bortolotto and K. E. Alley, 2021. Investigating Persistent Polynya Structure and Variability at Pine Island Glacier, West Antarctica, Using Seal-borne Measurements and Thermal Remote Sensing, *AGU Fall Meeting*.
- [149] \*Snow, T., F. Sapienza, S. Grigsby\*, J. Taylor, E. Savidge\*, W. Zheng, K. E. Alley, F. Perez and M. R. Siegfried, 2021. Basal channel outflow inferred from persistent polynya variability at the Eastern Thwaites Ice Shelf, *AGU Fall Meeting*.
- [148] Bienert, N. L., D. M. Schroeder, R. Sanda, E. Dawson, E. MacKie, S. T. Peters and M. R. Siegfried, 2021. Passively Synchronized Bistatic Radar System for Subsurface

- Tomography of Glaciers, *AGU Fall Meeting*.
- [147] Bryant, M., A. A. Borsa, R. J. Michaelides\* and M. R. Siegfried, 2021. Exploring coupled surface hydrology and freeze-thaw dynamics around Toolik Lake, Alaska, using ICESat-2 and InSAR data, *AGU Fall Meeting*.
  - [146] Gardner, A. S., S. Adusumilli, P. A. Arndt, K. Brunt, B. M. Csatho, D. Felikson, F. Paolo, H. A. Fricker, C. A. Greene, S. Kacimi, N. T. Kurtz, R. Kwok, B. Medley, T. Neumann, J. Nilsson, A. Petty, D. E. Shean, M. R. Siegfried and B. Smith, 2021. Surface Topography Observations Needed to Advance Cryosphere Science in the Coming Decades, *AGU Fall Meeting*.
  - [145] Grigsby, S., F. Sapienza, W. Zheng, J. Taylor, T. Snow\*, E. Savidge\*, F. Perez and M. R. Siegfried, 2021. Mission in a minute: Complex Spatial Query and Data Access in the Cloud for the ICESat-2 Mission, *AGU Fall Meeting*.
  - [144] Hawley, R. L., S. Grigsby\*, G. Lewis and M. R. Siegfried, 2021. CrackMap: Automated Extraction of Crevasses from High-Resolution Optical Imagery using Edge Detection, *AGU Fall Meeting*.
  - [143] Roth, D. L., G. Jin, A. Titov, M. R. Siegfried, C. C. Masteller and H. Jacobson, 2021. A river on fiber: capturing fluvial processes with distributed acoustic sensing, *AGU Fall Meeting*.
  - [142] Sapienza, F., S. Grigsby\*, W. Zheng, J. Taylor, F. Perez and M. R. Siegfried, 2021. Spectral Unmixing of Antarctic Snow Grain Size Distribution: A Data-Driven Perspective, *AGU Fall Meeting*.
  - [141] Smith, B. E., T. C. Sutterley, S. Dickinson, B. P. Jelley, S. Adusumilli, H. A. Fricker, A. S. Gardner, N. Holschuh, T. Neumann, L. Padman and M. R. Siegfried, 2021. An introduction to ICESat-2's gridded land-ice products, *AGU Fall Meeting*.
  - [140] Sutterley, T. C., B. Smith, K. Brunt, L. Padman, S. L. Howard, M. R. Siegfried, A. S. Gardner, H. A. Fricker, S. Adusumilli and N. Holschuh, 2021. Estimating Antarctic Grounding Zone Ice Flexure with ICESat-2 Data, *AGU Fall Meeting*.
  - [139] \*Follingstad, V., R. Michaelides\* and M. R. Siegfried, 2021. Quantifying the surface deformation of pingos on the Alaskan North Slope using interferometric synthetic aperture radar (InSAR), *2021 Regional Conference on Permafrost & 19th International Conference on Cold Regions Engineering*.
  - [138] \*Michaelides, R. M., M. Bryant, A. A. Borsa and M. R. Siegfried, 2021. Quantifying Surface-Height Change over a Periglacial Environment with ICESat-2 Laser Altimetry, *2021 Regional Conference on Permafrost & 19th International Conference on Cold Regions Engineering*.
  - [137] Hughson, K. H., B. E. Schmidt, E. Quartini, R. Michaelides\*, M. R. Siegfried, A. Mullen, J. H. Bradford, A. Swidinsky and H. G. Sizemore, 2021. Pingos as planetary analogs: The geophysical perspective, *GSA Connects Annual Meeting*.
  - [136] \*Sauthoff, W., M. R. Siegfried and B. E. Smith, 2021. Observing connected subglacial lake drainage at Slessor Glacier, East Antarctica, using ICESat-2 laser altimetry, *WAIS Workshop*.
  - [135] \*Savidge, E., T. Snow\*, M. R. Siegfried, L. Boehme, G. A. Bortolotto and K. E. Alley, 2021. Investigating persistent polynya structure and variability at Pine Island Glacier, West Antarctica, using seal-borne measurements and thermal remote sensing, *WAIS Workshop*.
  - [134] \*Snow, T., F. Sapienza, S. Grigsby\*, J. Taylor, E. Savidge\*, W. Zheng, K. Alley, F. Pérez and M. R. Siegfried, 2021. Eastern Thwaites basal channel outflow inferred from persistent polynya variability, *WAIS Workshop*.
  - [133] Rosenheim, B. E., R. A. Venturelli, T. Campbell, C. Davis, M. R. Siegfried, C. Mosbeux,

- M. Patterson, A. Michaud, T. Vick-Majors, A. Leventer, M. Skidmore, B. Christner, D. Harwood, J. C. Priscu and the SALSA Science Team, 2021. Holocene marine incursion supports a subglacial microbial community in the active hydrologic system beneath the West Antarctic Ice Sheet, *26th International Symposium on Polar Sciences*.
- [132] Skidmore, M., J. Barker, B. Christner, C. Davis, J. E. Dore, C. Gardner, B. Gill-Olivas, A. Michaud, J. Hawkings, W. Li, W. B. Lyons, M. R. Siegfried, A. Steigmeyer, M. Tranter, T. J. Vick-Majors, J. C. Priscu and the SALSA Science Team, 2021. Solute sources and weather processes in subglacial lake systems beneath the West Antarctic Ice Sheet, *26th International Symposium on Polar Sciences*.
- [131] Summers, P. T., D. M. Schroeder and M. R. Siegfried, 2021. Constraining ice sheet basal sliding and horizontal velocity profiles using a stationary phase sensitive radar sounder, *IGARSS 2021: 2021 IEEE International Geoscience and Remote Sensing Symposium*.
- [130] Zheng, W., S. Grigsby\*, F. Sapienza, J. Taylor, T. Snow\*, F. Perez and M. R. Siegfried, 2021. Mapping ice flow velocity using an interactive, cloud-based feature tracking workflow, *Arctic Research Collaboration Workshop*.
- [129] Livingstone, S., H. Björnsson, J. Bowling, W. Chu, C. Dow, H. A. Fricker, Y. Li, M. McMillan, J. Mikucki, F. Ng, N. Ross, A. Rutishauser, R. Sanderson, M. Siegert, M. R. Siegfried, A. Sole and K. Winter, 2021. Global synthesis of subglacial lakes and their changing role in a warming climate, *EGU General Assembly*.
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- [128] \*Grigsby, S., F. Sapienza, T. Snow\*, A. Cima, L. J. Heagy, M. R. Siegfried, F. Perez and J. Taylor, 2020. Spatio-Temporal Interpolation of Cloud Data, *AGU Fall Meeting*.
- [127] \*Michaelides, R. J., R. H. Chen, K. M. Schaefer, A. Parsekian, G. V. Frost, Jr., T. D. Sullivan, H. A. Zebker, M. Moghaddam, S. Natali and M. R. Siegfried, 2020. Wildfire, permafrost, and vegetation interactions in a discontinuous permafrost region revealed by dual-frequency airborne radar observations, *AGU Fall Meeting*.
- [126] Bienert, N. L., D. M. Schroeder, S. T. Peters, E. MacKie, M. R. Siegfried and E. Dawson, 2020. Design of Direct Path Synchronized Bistatic Radar Technique for Long Offset Glacial Temperature Tomography, *AGU Fall Meeting*.
- [125] Bryant, M., A. A. Borsa, H. A. Fricker, R. J. Michaelides, W. Neely and M. R. Siegfried, 2020. Integrating ICESat-2 and Sentinel-1 measurements to quantify thaw subsidence in Alaska, *AGU Fall Meeting*.
- [124] Campbell, T., M. L. Skidmore, M. R. Siegfried, J. Winans, B. Zook, J. C. Priscu and the SALSA Science Team, 2020. Basal Ice Stratigraphy from Mercer Ice Stream, West Antarctica: Implications for sub ice stream accretionary processes, *AGU Fall Meeting*.
- [123] Cima, A., F. Sapienza, T. Snow, S. Grigsby\*, L. J. Heagy, F. Perez and M. R. Siegfried, 2020. Fusion of ICESat-2 and complementary remote sensing data for interactive visualization in Jupyter, *AGU Fall Meeting*.
- [122] Gustafson, C., K. Key, M. R. Siegfried and H. A. Fricker, 2020. Extensive saline groundwater beneath Whillans Ice Stream, West Antarctica, *AGU Fall Meeting*.
- [121] Hughson, K., B. Schmidt, K. Udell, H. G. Sizemore, J. E. C. Scully, D. Buckowski, J. Bradford, M. R. Siegfried, A. Swidinsky, C. A. Raymond and C. T. Russell, 2020. A Comparative Morphological and Geospatial Analysis of Terrestrial Pingos and Anomalous Hills on Ceres, *AGU Fall Meeting*.
- [120] Rosenheim, B. E., R. Venturelli, C. Subt, I. M. Browne, T. M. King, T. Campbell, P. J. Bart, J. E. Dore, D. M. Harwood, J. Kingslake, J.-I. Lee, A. Leventer, A. B. Michaud, M. Patterson, A. Shevenell, M. R. Siegfried, M. L. Skidmore, K.-C. Yoo, H. I. Yoon and the SALSA Science Team, 2020. What can advances in Antarctic deglacial sediment  $^{14}\text{C}$  dating tell us about grounding line evolution?, *AGU Fall Meeting*.
- [119] Sapienza, F., T. Snow, A. Cima, S. Grigsby\*, L. J. Heagy, F. Perez, M. R. Siegfried and

- J. Taylor, 2020. Multimodal Dataset Integration for Cloud Masking of ICESat-2, *AGU Fall Meeting*.
- [118] Sutterley, T. C., B. E. Smith, K. Brunt and M. R. Siegfried, 2020. Evaluating Southern Ocean Tides Using ICESat-2 over Ice Shelves, *AGU Fall Meeting*.
  - [117] Venturelli, R., C. Davis, T. Vick-Majors, W. Li, M. R. Siegfried, J. D. Barker, A. Leventer, D. M. Harwood, B. Christner, H. A. Fricker, J. C. Priscu, B. E. Rosenheim and the SALSA Science Team, 2020. On the origin and cycling of Holocene-aged carbon beneath the West Antarctic Ice Sheet, *AGU Fall Meeting*.
  - [116] Campbell, T. D., M. L. Skidmore, M. R. Siegfried, J. Winans, R. Zook, J. C. Priscu and the SALSA Science Team, 2020. Basal ice stratigraphy from Mercer Ice Stream, West Antarctica: Implications for sub ice stream accretionary processes, *WAIS Workshop*.
  - [115] Culberg, R., M. R. Siegfried, B. Medley and D. M. Schroeder, 2020. Quantifying uncertainty in a 16-year time series of Larsen C Ice Shelf thickness from airborne radar sounding, *WAIS Workshop*.
  - [114] Gustafson, C. D., K. Key, M. R. Siegfried and H. A. Fricker, 2020. Imaging salty groundwater in sedimentary basins beneath Whillans Ice Plain, West Antarctica, *WAIS Workshop*.
  - [113] Hughson, K. H., B. E. Schmidt, K. Udell, H. G. Sizemore, J. E. Scully, D. L. Buczkowski, J. H. Bradford, M. R. Siegfried, A. Swidinsky, C. A. Raymond and C. T. Russell, 2020. A quantitative morphometric analysis of terrestrial pingos and anomalous hills on Ceres, *GSA Connects Annual Meeting*.
  - [112] Siegfried, M. R., R. A. Venturelli, M. O. Patterson, T. Campbell, J. Dore, H. A. Fricker, C. Gustafson, A. Leventer, A. Michaud, J. Priscu, B. E. Rosenheim, M. Skidmore, B. Huber, K. Mankoff, S. Cook, B. Galton-Fenzi and the SALSA Science Team, 2020. The life cycle of an Antarctic active subglacial lake: A process to paleo perspective, *SCAR Open Science Conference*.
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- [111] Siegfried, M. R., H. A. Fricker, C. Gustafson, K. Key, A. Leventer, J. E. Dore, B. A. Huber, K. Mankoff, J. C. Priscu, B. E. Rosenheim and the SALSA Science Team, 2019. Anatomy of a draining subglacial lake in West Antarctica, *AGU Fall Meeting*.
  - [110] Adusumilli, S., H. A. Fricker, B. Medley, L. Padman and M. R. Siegfried, 2019. Time-dependent freshwater fluxes from deep and shallow meltwater sources under Antarctica's large ice shelves, *AGU Fall Meeting*.
  - [109] Becker, M. K., H. A. Fricker, L. Padman, M. R. Siegfried, B. Medley, I. Das, S. I. Cordero, R. E. Bell and the ROSETTA-Ice Team, 2019. Mapping Marine Ice Beneath Ross Ice Shelf, Antarctica, with ROSETTA-Ice Radar Sounding and ICESat-2 Laser Altimetry, *AGU Fall Meeting*.
  - [108] Bienert, N. L., D. M. Schroeder, S. T. Peters, E. Dawson, E. Mackie and M. R. Siegfried, 2019. Inferring Temperature Distribution in Shear Margins from Large-Offset Bistatic Radar Sounding, *AGU Fall Meeting*.
  - [107] Gustafson, C., K. Key, M. R. Siegfried and H. A. Fricker, 2019. Electromagnetic imaging of subglacial hydrogeology of Whillans Ice Plain, West Antarctica, *AGU Fall Meeting*.
  - [106] Jordan, T. M., D. M. Schroeder, A. Brisbourne, C. Martin, C. W. Elsworth, M. R. Siegfried, R. Schlegel and A. Smith, 2019. Measurement of Ice Fabric within Ice Streams using Polarimetric Phase-Sensitive Radar Sounding, *AGU Fall Meeting*.
  - [105] Priscu, J. C., J. D. Barker, T. Campbell, B. C. Christner, C. Davis, J. E. Dore, H. A. Fricker, C. B. Gardner, D. M. Harwood, A. Leventer, W. Li, W. B. Lyons, A. B. Michaud, M. Patterson, B. E. Rosenheim, M. R. Siegfried, M. L. Skidmore, M. Tranter, R. Venturelli, T. Vick-Majors, B. Zook and the SALSA Science Team, 2019. SALSA: An Integrated Program Focusing on Carbon Transformations in Mercer Subglacial Lake located ~1100 m beneath the West Antarctic Ice Sheet, *AGU Fall Meeting*.

- [104] Skidmore, M. L., C. B. Gardner, A. Steigmeyer, M. R. Siegfried, J. D. Barker, J. E. Dore, B. G. Olivas, J. Hawkings, W. B. Lyons, M. Tranter, J. C. Priscu and the SALSA Science Team, 2019. A tale of two lakes — contrasting weathering regimes in proximal subglacial Antarctic systems, *AGU Fall Meeting*.
- [103] Smith, B. E., B. Medley, F. S. Paolo, J. Nilsson, N. Holschuh, S. Adusumilli, M. R. Siegfried and the ICESat-2 Land-Ice Team, 2019. Sixteen Years of Ice-Sheet Change from ICESat to ICESat-2, *AGU Fall Meeting*.
- [102] Venturelli, R., B. E. Rosenheim, A. Leventer, D. M. Harwood, M. O. Patterson, T. Campbell, M. R. Siegfried, H. A. Fricker and the SALSA and WISSARD Science Teams, 2019. A Dynamic Holocene Grounding Line: In situ sedimentary evidence from Whillans and Mercer ice streams, West Antarctica, *AGU Fall Meeting*.
- [101] Barchek, G., E. Brodsky, P. Fulton, M. King, M. R. Siegfried and S. Tulaczyk, 2019. Insights into earthquake initiation from ice stream stick-slip dynamics, *International Antarctic Earth Science Workshop*.
- [100] Derby, L., N. Ross, F. Ferraccioli, R. Carr, T. Jordan, M. R. Siegfried, G. Paxman, K. Matsuoka, R. Forsberg and T. Casal, 2019. Active subglacial lakes of the Foundation Ice Stream, Antarctica, *International Glaciological Society British Branch Meeting*.
- [99] \*Becker, M. K., H. A. Fricker, L. Padman, M. R. Siegfried, C. Mosbeaux and T. J. W. Wagner, 2019. An overlooked ice-shelf calving process for accelerating Antarctic Ice Sheet loss, *Forum for Research into Ice Shelf Processes*.
- [98] \*Adusumilli, S., H. A. Fricker, B. Medley, L. Padman and M. R. Siegfried, 2019. Partitioning time-varying meltwater fluxes from Antarctica's large ice shelves into the intermediate and upper ocean, *Forum for Research into Ice Shelf Processes*.
- [97] Siegfried, M. R., H. A. Fricker, C. Gustafson, K. Key, A. Leventer, J. E. Dore, B. Huber, K. Mankoff, J. Priscu, B. Rosenheim and the SALSA Science Team, 2019. Physical properties of a draining subglacial lake, *International Symposium on Antarctic Earth Science*.
- [96] Siegfried, M. R. and D. M. Schroeder, 2019. Interpreting radar bed-echo power from active subglacial lakes on lower Mercer and Whillans ice streams, West Antarctica, *IGS Symposium on Radioglaciology*.
- [95] Bienert, N., D. Schroeder, S. Peters and M. R. Siegfried, 2019. Improving constraints on englacial temperature and water distribution using an autonomous phase-sensitive radio echo sounder (ApRES) and a bistatic software defined receiver, *IGS Symposium on Radioglaciology*.
- [94] Chu, W., D. Schroeder and M. R. Siegfried, 2019. Retrieval of firn aquifer thickness and englacial water volume using ice-penetrating radar sounding, *IGS Symposium on Radioglaciology*.
- [93] Jordan, T., D. Schroeder, C. Elsworth, D. Jørgen and M. R. Siegfried, 2019. Estimation of ice fabric within the Whillans Ice Stream using polarimetric phase-sensitive radar sounding, *IGS Symposium on Radioglaciology*.
- [92] Davis, C., W. Li, T. Vick-Majors, J. D. Barker, A. Michaud, J. E. Dore, M. R. Siegfried, M. Tranter, M. Skidmore, C. Gardner, R. Venturelli, T. Campbell, M. O. Patterson, A. Leventer, D. M. Harwood, B. E. Rosenheim, J. C. Priscu and B. C. Christner, 2019. Life Below an Ice Sheet: Mercer Subglacial Lake, West Antarctica, *Astrobiology Science Conference*.
- [91] Jordan, T. M., D. M. Schroeder, C. W. Elsworth, D. Castelletti, J. Li, M. R. Siegfried and J. Dall, 2019. Polarimetric coherence: a data analysis method to determine ice fabric from phase-sensitive radar sounding, *EGU General Assembly*.
- 2018 [90] \*Adusumilli, S., H. A. Fricker, L. Padman and M. R. Siegfried, 2018. Time-varying fresh-

- water fluxes from Antarctic ice shelves, *AGU Fall Meeting*.
- [89] \*Becker, M. K., H. A. Fricker, L. Padman, M. R. Siegfried, C. Mosbeux and T. J. Wagner, 2018. Dynamic small-scale morphology and mass-loss processes near the fronts of Antarctica's large ice shelves, *AGU Fall Meeting*.
  - [88] Chu, W., D. Schroeder and M. R. Siegfried, 2018. Retrieval of Englacial Firn Aquifer Thickness from Ice-Penetrating Radar Sounding in Southeastern Greenland, *AGU Fall Meeting*.
  - [87] Das, I., L. Padman, R. E. Bell, K. J. Tinto, H. A. Fricker, N. Frearson, C. S. Siddoway and M. R. Siegfried, 2018. Airborne Radar Reveals Multi-Decadal Basal Melt Rates for Ross Ice Shelf, Antarctica, *AGU Fall Meeting*.
  - [86] Padman, L., R. E. Bell, I. Das, C. Mosbeux, D. Porter, C. S. Siddoway, M. R. Siegfried, S. R. Springer, K. J. Tinto and the ROSETTA-Ice Team, 2018. Ice Shelf Vulnerability to Seasonal Upper Ocean Warming, *AGU Fall Meeting*.
  - [85] Smith, B. E., A. S. Gardner, N. Holschuh, M. R. Siegfried, B. M. Csatho, A. F. Schenk, S. Adusumilli, T. Neumann, K. M. Brunt and K. Harbeck, 2018. ICESat-2 Over Antarctica and Greenland: First Evaluation of Land-Ice Elevation Products, *AGU Fall Meeting*.
  - [84] Tinto, K. J., R. E. Bell, I. Das, H. A. Fricker, L. Padman, D. Porter, C. Siddoway, M. R. Siegfried, S. R. Springer and the ROSETTA-Ice Team, 2018. Tectonic setting controls long term stability of Ross Ice Shelf, *AGU Fall Meeting*.
  - [83] Siegfried, M. R. and D. M. Schroeder, 2018. Reconciling conflicting observations of active subglacial lakes: A case study on lower Mercer and Whillans ice streams, *WAIS Workshop*.
  - [82] \*Adusumilli, S., H. A. Fricker, L. Padman and M. R. Siegfried, 2018. Time-varying freshwater fluxes from Antarctic ice shelves, *WAIS Workshop*.
  - [81] \*Becker, M. K., H. A. Fricker, L. Padman, M. R. Siegfried, C. Mosbeux and T. J. Wagner, 2018. Dynamic small-scale morphology and mass-loss processes near the front of Ross Ice Shelf, *WAIS Workshop*.
  - [80] Das, I., L. Padman, R. E. Bell, K. J. Tinto, H. A. Fricker, N. Frearson, C. S. Siddoway and M. R. Siegfried, 2018. Multi-Decadal Basal Melt Rates from Airborne Radar for Ross Ice Shelf, Antarctica, *WAIS Workshop*.
  - [79] Schroeder, D. M., J. A. Dowdeswell, M. J. Siegert, R. G. Bingham, W. Chu, E. J. MacKie, M. R. Siegfried, K. I. Vega, J. R. Emmons and K. Winstein, 2018. Multi-Decadal Observations of the Antarctic Ice Sheet from Archival Radar Film, *WAIS Workshop*.
  - [78] Siegfried, M. R. and D. M. Schroeder, 2018. Radar sounding of active subglacial lakes on the Siple Coast, *Bay Area Glaciology Meeting*.
  - [77] Mosbeux, C., T. Wagner, M. Becker, H. A. Fricker and M. R. Siegfried, 2018. Buoyancy stresses as drivers of ice-shelf calving, *IGS Symposium on Timescales, Processes, and Glacier Dynamics*.
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