

Dr. Lauren M. Simkins (she/her)  
Assistant Professor of Environmental Sciences  
University of Virginia  
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## RESEARCH EXPERTISE

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Glacial geology, glaciology, geomorphology, marine geology, sedimentology, geochronology

## EDUCATION

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**University of California Santa Barbara** 2010 - 2014  
Doctor of Philosophy in Geological Sciences (under the advisement of Drs. A.R. Simms and R. Dewitt)  
NSF Louis Stokes Alliance for Minority Participation Bridge to Doctorate Fellow

**Oklahoma State University** 2005 - 2009  
Bachelor of Science in Geology  
NSF Louis Stokes Alliance for Minority Participation Scholar

## PROFESSIONAL APPOINTMENTS

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**Assistant Professor** 2018 - present  
Department of Environmental Sciences, University of Virginia

**Postdoctoral Research Associate** 2014 - 2018  
Department of Earth Science, Rice University

## TEACHING EXPERIENCE AT THE UNIVERSITY OF VIRGINIA

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### Lecture courses

Polar Environments, EVSC 2850 (formerly EVSC 2559), co-taught with S. Doney  
Glaciology, EVSC 5880 (formerly EVSC 4559/7559)  
Fundamentals of Geology, EVSC 2800  
Beaches Coasts and Rivers, EVSC 2900, co-taught with P. Wiberg

### Lecture + laboratory & laboratory-exclusive courses

Fundamentals of Geology Laboratory, EVSC 2801, 5 sections with 5 Graduation Teaching Assistants  
Marine Geology, EVSC 4840/EVGE 7840

### Field, seminars & research supervision courses

Geoscience in the Field, EVSC 4559/7559, co-taught with A. Limaye  
Undergraduate Seminar, EVSC 4002, co-taught with S. Macko  
Supervised Research, EVSC 4995  
Senior Thesis Research, EVSC 4999  
Research problems, EVSC 9995  
Non-Topical Research, Doctoral, EVSC 9999

## RESEARCH MENTORSHIP

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**University of Virginia**

**Current:** Allison Lepp (PhD, primary adviser), Marion McKenzie (PhD, primary adviser), Santiago Munevar (PhD, primary adviser), Tahi Wiggins (BS, research adviser), Medha Prakash (BS, research adviser), Jacob Smith (MS, committee member).

**Former:** Delaney Buskard (BS, senior thesis adviser), Hannah Leigh (BS, research adviser), Mackenzie Carter (BS, research adviser), Elizabeth Eareckson (BS, research adviser), Sarah Lang (BS, research adviser), Catherine Leigh (BS, research adviser), Sean Penaparanda (BS, research adviser), Jacob Slawson (BS, Distinguish Majors Program thesis adviser), Alan Zhai (BS, research adviser), Morgan Shelby (MS, committee member), Emilia Torrellas (MS, committee member)

### Rice University

**Former:** Christine Kendrick (HS, research adviser), Bethany Fowler (BS, research adviser), Adlai Fonesca (Visiting MS student, research adviser), Kelsey Crocker (BS, research adviser), Brian Demet (MS, as informal mentor), Anna Ruth Halberstadt (MS, as informal mentor), Lindsay Prothro (PhD, as informal mentor)

### University of California Santa Barbara

**Former:** Angela Roman (Santa Barbara City College, research adviser), Adrian Gallardo (Santa Barbara City College, research adviser), Gustavo Muro (Ventura City College, research adviser), Eugene Wang (Santa Barbara City College, research adviser), Richard Mata (Mount San Antonio College, research adviser), Francisco Contreras (Oxnard City College, research adviser), Anna Lovelace (Oxnard City College, research adviser), Masoud Razavi (Oxnard City College, research adviser), Stacia Ott (Oxnard City College, research adviser)

## GRANTS & PROPOSALS

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### In preparation & submitted

**Collaborative research: Circum-Antarctic processes from archived marine sediment cores (ANTS)**, to be submitted to NSF OPP Antarctic Earth Sciences in February 2022 with a budget of ~\$897,389 over 4 years to Lead PI Simkins at UVA. Collaborators include Lindsay Prothro (TAMU-Corpus Christi) and Ryan Venturelli (Tulane University) with additional budgets that sum to ~\$1,000,000.

**Advancing Cultural Capital through Experiences in STEM and Society (ACCESS)**, submitted to NSF AISL Innovations in Development in January 2022 (budget \$2,978,654; all to UVA) as a 5-year project, PI: Kristin Morgan, Co-Is: Nancy Deutsch, Devin Harris, Lauren Simkins.

### Awarded, ongoing

**WAIS Workshops 2020 and 2022: A transdisciplinary forum to accelerate NASA-funded research of marine-based ice sheet systems**, funded by NASA Cryosphere Program (\$125,000; none at UVA), PI: Matthew Siegfried (Colorado School of Mines), Co-Is: Lauren Simkins, Joseph MacGregor, Brook Medley, Indrani Das, Knut Christianson.

**WAIS Workshops 2019–2022: A transdisciplinary forum for studies of the West Antarctic Ice Sheet by the next generation of polar scientists**, funded by NSF Division of Polar Programs (\$125,000; none at UVA), PI: Matthew Siegfried (Colorado School of Mines), Co-Is: Lauren Simkins, Joseph MacGregor, Brook Medley, Indrani Das, Knut Christianson.

**NSFPLR-NERC: Thwaites Glacier Offshore Research (THOR)**, funded by NSF Division of Polar Programs: Antarctic Glaciology (\$242,494; all to UVA) 4/2018-3/2023, Subaward to Lauren Simkins (Co-I, as part of international project).

**NSF Collaborative Research: Topographic controls on Antarctic Ice Sheet grounding line behavior - integrating models and observations**, funded by NSF Division of Polar Programs: Antarctic Glaciology & Earth Sciences (\$300,433; all to UVA) 9/2018-8/2022, PI: Lauren Simkins.

#### **Awarded, concluded**

**Solid Earth-Ice Sheet Interactions**, funded by The H.G. Goodell Endowment, University of Virginia (\$11,000; internal), 3/2020-present, PI: Lauren Simkins.

**Saturday Series: merging hands-on environmental sciences and art for K-6 children in the Charlottesville and Albemarle County areas**, funded by Charlottesville Area Community Foundation (\$3,500; none to UVA), 1/2021-12/2021, PIs: Kate Kogge (Science Lead and Teacher, Murray Community School) and Lauren Simkins.

**Paleo-coastal response to higher-than-present sea level**, funded by The University of Virginia Committee on Sustainability (\$8,000; internal), 1/2019-6/2021, PI: Lauren Simkins.

**CMP1602P: Retreat dynamics of marine-based ice sheets**, funded by International Union for Quaternary Research (INQUA) (\$9,000; none to UVA), 6/2016-6/2019, Co-Is: Lilja Bjarnadottir, Sarah Greenwood, Lauren Simkins, Monica Winsborrow.

**Educational Materials for EVSC 2801**, funded by The H.G. Goodell Endowment, University of Virginia (\$1,000; internal) 11/2019-1/2020, PI: Lauren Simkins.

**Washington State Field Trip for Undergraduate Majors**, funded by The H.G. Goodell Endowment, University of Virginia (\$4,800; internal), 11/2018-8/2019, PI: Lauren Simkins.

#### **Submitted, not awarded**

**Saturday Enviro-Series**, submitted to The Jefferson Trust in September 2021 (\$55,700; all to UVA) with Lauren Simkins as the sole PI.

**An integrated and holistic approach to polar environments through research, curricula, and field experience in natural sciences, engineering, and design**, submitted to the NSF Research Traineeship (NRT) Program in February 2021 with a budget of \$2,999,101 (all to UVA), Howard Epstein (PI); Scott Doney, Matthew Jull, **Lauren Simkins**, Caitlin Wylie (Co-Is); Leena Cho, Devin Harris, and Garrick Louis (Senior Personnel). Plan to revised and resubmit.

**Landscape feedbacks on the advance and retreat of the southern Cordilleran Ice Sheet (LandCIS)**, submitted to NSF Geomorphology and Land Use Dynamics in February 2021 with a budget of \$1,448,410 (all to UVA), **Lauren Simkins** (PI) with Julien Seguinot (Senior Personnel) and subawards to Regina DeWitt (East Carolina U) and Brad Rosenheim (U of South Florida). Plan to revised and resubmit.

## **PROFESSIONAL AWARDS, FELLOWSHIPS & RECONGNITION**

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### **2020-2021 Mead Honored Faculty, University of Virginia**

Nominated and awarded for outstanding educational engagement with students in and outside of class, after just two years as faculty at UVA.

**(Cancelled) Visiting Fellow** at Hokkaido University in Sapporo, Japan, hosted by Dr. Shin Sugiyama.

Originally to be completed August to December 2021 but cancelled due to the COVID-19 pandemic.

Recognized by an unknown number of first- through third-year undergraduate students as “**the one individual who helped them the most with their career development**” through a survey conducted by the UVA Career Center in the spring 2021 semester.

## INVITED SEMINARS (SINCE 2018)

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University of Florida (upcoming in 2022), Montclair State University (upcoming in 2022), Appalachian State University (upcoming in 2022), International Glaciological Society Virtual Seminar (2021), University of Texas Institute for Geophysics (2021), British Antarctic Survey, Ice Dynamics & Paleoclimate group (2021), WHOI Department of Marine Chemistry and Geochemistry (2020), Georgia Southern University (2020), Old Dominion University (2020), Georgia Tech (2020), University of Delaware (2019), College of William and Mary (2018), University of Illinois, Chicago (2018)

## PEER-REVIEWED PUBLICATIONS (ADVISEES ARE UNDERLINED)

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### In preparation (i.e., manuscript drafting)

Herbert, L.C., Lepp, A., **Simkins, L.**, Wellner, J., Severmann, S., St. Laurent, P., Stammerjohn, S., Yager, P., Sherrell, R., 2021. Glacially derived sediment sources of iron fueling productivity in the Amundsen Sea.

### Submitted, in review & in revision

Lepp, A.P., **Simkins, L.M.**, Anderson, J.B., Wellner, J.S., Clark, R., Lehrmann, A., Hillenbrand, C.-D., Smith, Minzoni, R., Graham, A., Hogan, K., Nitsche, F., Larter, R. Persistent meltwater discharge recorded by Holocene sediment cores offshore Thwaites Glacier. *Frontiers in Earth Science*, in review.

**Simkins, L.M.**, Stearns, L.A., Riverman, K. Controls on circum-Antarctic grounding line sinuosity. *Journal of Geophysical Research: Earth Surface*, in review.

McKenzie, M., **Simkins, L.M.**, Principato, S. Subglacial bedform sensitivity to bed characteristics across the deglaciated Northern Hemisphere. *Earth Surface Processes and Landforms*, in revision.

Robel, A., Pegler, S., Catania, G., Felikson, D., **Simkins, L.M.** Illusory stability of marine-terminating glaciers at bedrock highs. *Journal of Glaciology*, re-submitted.

Graham, A.G.C., Wahlin, A., Hogan, K.A., Nitsche, F.O., Heywood, K.J., Minzoni, R., Smith, J.A., Hillenbrand, C.-D., **Simkins, L.M.**, Wellner, J.S., Larter, R.D., submitted. Rapid tidally modulated retreat of Thwaites Glacier from a pinning point in the pre-satellite era. *Nature Geoscience*, in revision.

### Published

25. **Simkins, L.M.**, Greenwood, S.L., Munevar Garcia, S., Eareckson, E.A., Anderson, J.B., Prothro, L.O. (2021). Topographic controls on channelized meltwater in the subglacial environment. *Geophysical Research Letters*, 48, e2021GL094678. [[link](#)]

24. Simms, A.R., Bentley, M., **Simkins, L.M.**, Zurbuchen, J., Reynolds, L.C., DeWitt, Regina, 2021. Evidence for a “Little Ice Age” glacial advance within the Antarctic Peninsula – examples from glacially-overrun raised beaches. *Quaternary Science Reviews*, 271, 107195. [[link](#)]

23. Greenwood, S.L., **Simkins, L.M.**, Winsborrow, M.C.M., Bjarnadóttir, L.R., 2021. Exceptions to bed-controlled ice sheet flow and retreat from glaciated continental margins worldwide. *Sciences Advances*, 7, eabb6291. [equal authorship; [link](#)]

22. Hogan, K., Larter, R., Graham, A., Arthern, R., Kirkham, J.D., Minzoni, R.T., Jordan, T., Clark, R., Fitzgerald, V., Anderson, J.B., Hillenbrand, C.D., Nitsche, F.O., **Simkins, L.M.**, Smith, J.A., Gohl, K., Arndt, J.E., Hong, J., Wellner, J., 2020. Revealing the former bed of Thwaites Glacier using sea-floor bathymetry. *The Cryosphere*, 14, 2883–2908. [[link](#)]

21. Majewski, W., Prothro, L.O., **Simkins, L.M.**, Demianiuk, E.J., Anderson, J.B., 2020. Foraminiferal patterns in deglacial sediment in the western Ross Sea, Antarctica: life near paleo-grounding lines. *Paleoceanography and Paleoclimatology*, 35(5), e2019PA003716. [[link](#)]

20. Prothro, L.O., Majewski, W., Yokoyama, Y., **Simkins, L.M.**, Anderson, J.B., Yamane, M., Miyairi, Y. and Ohkouchi, N., 2020. Timing and pathways of East Antarctic Ice Sheet retreat. *Quaternary Science Reviews*, 230, 106166. [[link](#)]
19. Demet, B.P., Nittroter, J.A., Anderson, J.B., **Simkins, L.M.**, 2019. Sedimentary processes at ice sheet grounding-zone wedges: examples from Antarctica and Washington state. *Earth Surface Processes and Landforms*, 44(6), 1209-1220. [[link](#)]
18. Anderson, J.B., **Simkins, L.M.**, Bart, P.J., De Santis, L., Halberstadt, A.R.W., Olivo, E. and Greenwood, S.L., 2019. Seismic and geomorphic records of Antarctic Ice Sheet evolution in the Ross Sea and controlling factors in its behaviour. *Geological Society of London, Special Publications*, 475, SP475-5. [[link](#)]
17. King, B.L., Simms, A., **Simkins, L.M.**, 2019. The Stratigraphic Architecture of Small Incised Valleys Along an Active Margin: Examples from the Oceanside Littoral Cell of the Southern California Coast. *Journal of Sedimentary Research*, 17(1), 78–86. [[link](#)]
16. Halberstadt, A.R., **Simkins, L.M.**, Anderson, J.B., Prothro, L.O., Bart, P.J., 2018. Characteristics of the deforming bed: Till properties on the deglaciated Antarctic continental shelf. *Journal of Glaciology*, 1-14. [[link](#)]
15. Simms, A., Whitehouse, P., **Simkins, L.M.**, Nield, G., DeWitt, R., Bentley, M., 2018. Late Holocene relative sea levels near Palmer Station, northern Antarctic Peninsula, strongly controlled by late Holocene ice-mass changes. *Quaternary Science Reviews*, 199, 49-59. [[link](#)]
14. **Simkins, L.M.**, Greenwood S.L., Anderson, J.B., 2018. Diagnosing ice sheet grounding line stability from landform morphology. *The Cryosphere*, 12, 2707-2726. [[link](#)]
13. Greenwood, S.L., **Simkins, L.M.**, Halberstadt, A.R.W., Prothro, L.O., Anderson, J.B., 2018. Holocene reconfiguration and readvance of the East Antarctic Ice Sheet. *Nature Communications*, 9, 3176. [[link](#)]
12. Prothro, L.O., **Simkins, L.M.**, Majewski, W., Anderson, J.B., 2018. Glacial retreat patterns and processes determined from integrated sedimentology and geomorphology records. *Marine Geology*, 395, 104-119. [[link](#)]
11. **Simkins, L.M.**, Anderson, J.B., Greenwood, S.L., Gonnermann, H., Prothro, L.O., Halberstadt, A.R.W., Stearns, L.A., Pollard, D., DeConto, R.M, 2017. Anatomy of a meltwater drainage system beneath the ancestral East Antarctic Ice Sheet. *Nature Geoscience*, 10, 691-697. [[link](#)]
10. **Simkins, L.M.**, Anderson, J.B., Demet, B.P., 2017. Grounding line processes of the southern Cordilleran Ice Sheet in the Puget Lowland. *Geological Society of America Field Guide* 49, 53-65. [[link](#)]
9. **Simkins, L.M.**, Anderson, J.B., Greenwood, S.L., 2016. Glacial landform assemblage reveals complex retreat of grounded ice in the Ross Sea, Antarctica. in Dowdeswell, J. A., Canals, M., Jakobsson, M., Todd, B. J., Dowdeswell, E. K. & Hogan, K. A. (eds). Atlas of Submarine Glacial Landforms: Modern, Quaternary and Ancient. *Geological Society of London, Memoirs*, 46, 353–356. [[link](#)]
8. **Simkins, L.M.**, DeWitt, R., Simms, A.R., Briggs, S., Shapiro, R., 2016. Investigation of optically stimulated luminescence behavior of crystalline rock surfaces: A look forward. *Quaternary Geochronology*, 36, 161-173. [[link](#)]
7. Halberstadt, A.R.W., **Simkins, L.M.**, Greenwood, S.L., Anderson, J.B., 2016. Paleo-ice sheet behaviour: retreat scenarios and changing controls in the Ross Sea, Antarctica. *The Cryosphere*, 10, 1003-1020. [[link](#)]
6. Yokoyama, Y., Anderson, J.B., Yamane, M., **Simkins, L.M.**, Miyairi, Y., Yamazaki, T., Koizumi, M., Suga, H., Kusahara, K., Hasumi, H., Southon, J.R., Ohkouchi, N., 2016. Widespread collapse of the Ross Ice Shelf during the late Holocene. *Proceedings of the National Academy of Sciences*, 113(9), 2354-2359. [[link](#)]

5. **Simkins, L.M.**, Simms, A., Regina DeWitt, 2015. Assessing the link between coastal morphology, wave energy, and sea ice throughout the Holocene from Antarctic raised beaches. *Journal of Quaternary Science*, 30, 335-348. [[link](#)]
4. **Simkins, L.M.**, DeWitt, R., Simms, A., 2013. Methods to reduce sample carrier contamination for luminescence measurements. *Ancient TL*, 31 (1), 19-27. [[link](#)]
3. **Simkins, L.M.**, Simms, A., Cruse, A., Troiani, T., Atekwana, E., Puckette, J., Yokoyama, Y., 2012. Correlation of early and mid-Holocene events using magnetic susceptibility in estuarine cores from the Gulf of Mexico. *Palaeogeography, Palaeoclimatology, and Palaeoecology*, 346-347, 95-107. [[link](#)]
2. Simms, A., Ivins, E., DeWitt, R., Kouremenos, P., **Simkins, L.M.**, 2012. Timing of the Little Ice Age in the Antarctic Peninsula from optically stimulated luminescence of cobble surfaces within raised beaches. *Quaternary Science Reviews*, 47, 41-55. [[link](#)]
1. Simms, A., Aryal, N., **Miller, L.**, Yokoyama, Y., 2010. The Incised Valley of Baffin Bay, Texas: A Tale of Two Climates. *Sedimentology*, 57, 642-669. [[link](#)]

#### CONFERENCE PRESENTATIONS (SINCE 2020; ADVISEES ARE UNDERLINED)

- (invited) Wellner, J.S., Clark, R.C., Lehrmann, A., Lepp, A.L., Hillenbrand, C.D., Totten, R.L., **Simkins, L.M.**, Comas, R.M., Mawbey, E., Hopkins, B., Smith, J.A., Anderson, J.B., Hogan, K.A, Nitsche, F.O, Graham, A.G.C., Larter, R.D., upcoming 2022. Pre-satellite retreat of Thwaites and Pine Island glaciers: Recent results from sediment cores. European Geophysical Union, Session: CL1.1.2 Polar regions – climate, oceanography, tectonics, and geohazards.
- Wiggins, T., Munevar Garcia, S., Lepp, A.L., Simkins, L.M., upcoming 2022. Morphometry of glacial lakes in North America. Southeast GSA Annual meeting Abstract, Cincinnati, OH, USA.
- Prakash, M., **Simkins, L.**, McKenzie, M., Smith, J., Limaye, A., upcoming 2022. Morphology and process-based implications of martian ridges and terrestrial eskers. Northeast GSA Annual meeting Abstract, Lancaster, PA, USA.
- McKenzie, M., Slawson, J., **Simkins, L.**, Wang, S., MacKie, E., upcoming 2022. Influence of bed highs on ice flow as determined by bedform morphology. Northeast GSA Annual meeting Abstract, Lancaster, PA, USA.
- Simkins, L.M.**, Stearns, L.A., Riverman, K., Controls on circum-Antarctic grounding line sinuosity, Session C45C: Boundary Conditions and Earth-Ice Interactions Beneath Ice Sheets and Ice Shelves II Poster, American Geophysical Union 2021.
- Minzoni, R.T., Lehrmann, A., Clark, R.C., Mawbey, E., Wellner, J.S., Hillenbrand, C.D., Smith, J.A., Larter, R.D., Comas, R.M., Hopkins, B., Anderson, J.B., Graham, A.G.C., Hogan, K.A, **Simkins, L.M.**, Lepp, A., Nitsche, F.O., and Tegert, E. Microfossil fingerprints of glacial stability: Using diatoms and foraminifera to reconstruct the history of Thwaites Glacier, West Antarctica, Session C027: Processes involved in the rapid retreat of the West Antarctic Ice Sheet, American Geophysical Union 2021.
- Nitsche, F.O., Hogan, K.A, Graham, A.G.C., Minzoni, R.T., Smith, J.A., Hillenbrand, C.D., **Simkins, L.M.**, Wellner, J.S., Larter, R.D., Anderson, J.B., Clark, R., Mawbey, E., Hopkins, B., Lepp, A., Marschalek, J., Munevar Garcia, S., Dorschel, B., Arndt, J.E., Gohl, K., Lee, W.S. New detailed bathymetry data from Amundsen Sea continental shelf reveal more comprehensive paleo ice flow pattern, Session C011: Boundary conditions and Earth-ice interactions beneath ice sheets and ice shelves, American Geophysical Union 2021.
- (invited) Catania, G., Stearns, L., Carr, C., Poinar, K., Datta, R.T., **Simkins, L.**, Florentine, C. Increasing Retention of Minoritized Genders in the Cryospheric Sciences, Session C032: The Cryosphere is for All: Towards a more diverse and inclusive cryospheric sciences, American Geophysical Union 2021.
- (invited) Mejia, J.Z., Barnett, C.T., Bassis, J.N., Duddu, R., Goliber, S.A., Lummus, M., Shahin, M.G., **Simkins, L.M.**, Stearns, L.A., Trunz, C., Ultee, E. Best practices for building a more inclusive glaciology through

cryocommunity.org, Session C032: The Cryosphere is for All: Towards a more diverse and inclusive cryospheric sciences, American Geophysical Union 2021.

- (invited) Herbert, L.C., Lepp, A., **Simkins, L.**, Wellner, J., Severmann, S., St. Laurent, P., Stammerjohn, S., Yager, P., Sherrell, R., 2021. Glacially derived sediment sources of iron fueling productivity in the Amundsen Sea. Upcoming, 2021 WAIS Workshop.
- Herbert, L.C., Lepp, A., **Simkins, L.**, Wellner, J., Severmann, S., Sherrell, R., submitted. Sediment biogeochemistry and trace metal fluxes near the Thwaites and Pine Island Glaciers, Amundsen Sea. Session 13a: Marine biogeochemistry: Particle fluxes and dissolved trace element cycling from source to sink, Goldschmidt 2021.
- Simkins, L.M.**, Greenwood, S.L., Munevar Garcia, S., Prothro, L.O., Anderson, J.B. A gaining and losing meltwater corridor in the subglacial environment. Session C001: Advances in Glacier Hydrology, American Geophysical Union 2020.
- Munevar Garcia, S., **Simkins, L.M.**, Falcini, F. A.M., Stearns, L.A., Rezvanbehbahani, S. Bed roughness impact on streaming ice-flow persistence. Session C034: Sub-Ice-Sheet and Sub-Ice-Shelf Environments: Bridging the Gap Between Modern Observations and Geologic Records, American Geophysical Union 2020.
- Lepp, A., **Simkins, L.M.**, Minzoni, R., Wellner, J., Clark, R., Fitzgerald, V., Lehrmann, A., Hillenbrand, C.-D., Smith, J., Anderson, J., Larter, R., Graham, A., Hogan, K., Nitsche, F. Persistent Meltwater Discharge from Thwaites Glacier Recorded in Offshore Sediments. Session C034: Sub-Ice-Sheet and Sub-Ice-Shelf Environments: Bridging the Gap Between Modern Observations and Geologic Records, American Geophysical Union 2020.
- McKenzie, M., Slawson, J., **Simkins, L.M.**, Variability in subglacial bedforms at assemblage and regional scales across the deglaciated Puget Lowland, Washington state. Session C034: Sub-Ice-Sheet and Sub-Ice-Shelf Environments: Bridging the Gap Between Modern Observations and Geologic Records, American Geophysical Union 2020.
- Robel, A., Pegler, S., Catania, G., Felikson, D., **Simkins, L.M.**, Illusory stability of marine-terminating glaciers at bedrock highs. Session C010: Controls on Marine-Terminating Glacier, Ice Stream, and Ice Shelf Dynamics in Observations and Models, American Geophysical Union 2020.
- Simms, A., Zurbuchen, J., Gernant, C., Theilen, B., DeWitt, R., Garcia, C., **Simkins, L.M.**, How sensitive are Antarctic Holocene relative sea-level records to late-Holocene glacial fluctuations? Session G004: Linking Cryosphere and the Solid Earth: From Sea Level Changes and Geodetic Timeseries to Earth Rheology, American Geophysical Union 2020.
- Wellner, J.S., Larter, R.Graham, A., Hillenbrand, C.-D., Hogan, K., Minzoni, R., Nitsche, F., Smith, J. Anderson, J., **Simkins, L.M.**, Clark, R., Fitzgerald, V., Hopkins, R., Lehrmann, A., Lepp, A., Marschalek, J., Mawbey, E., Kirkham, J., Munevar, S., Taylor, L., Initial Geologic Results from Thwaites Glacier Offshore Research (THOR) 2019 and 2020 Field Seasons. Geological Society of America Annual Meeting 2020.
- (invited) **Simkins, L.M.**, Greenwood, S.L., Winsborrow, M.C.M., Bjarnadóttir, L.R., 2020. Exceptions to bed-controlled ice sheet flow and retreat from continental margins worldwide. Session T138: Sea Level and Ice-Sheet Changes, Glacial Isostatic Adjustment, and Landscape Evolution, Geological Society of America Annual Meeting 2020.
- Munevar Garcia, S., **Simkins, L.M.**, Falcini, F. A.M., Stearns, L.A., Rezvanbehbahani, S., 2020. Bed roughness impact on streaming ice-flow persistence. WAIS Workshop 2020.
- Lepp, A., **Simkins, L.M.**, Minzoni, R., Wellner, J., Clark, R., Fitzgerald, V., Lehrmann, A., Hillenbrand, C.-D., Smith, J., Anderson, J., Larter, R., Graham, A., Hogan, K., Nitsche, F., 2020. Persistent Meltwater Discharge from Thwaites Glacier Recorded in Offshore Sediments. WAIS Workshop 2020.

- Simkins, L.M.**, 2020. Glacial landforms as archives of grounding line processes and retreat. WAIS Workshop 2020.
- Majewski, W., Bart, P., Prothro, L.O., **Simkins, L.M.**, Anderson, J.B. Sub-fossil foraminifera in the Ross Sea, Antarctica: Life near grounding lines. International Polar Symposium 2020.
- Majewski, W., Bart, P., Prothro, L.O., **Simkins, L.M.**, Anderson, J.B., 2020. Foraminifera in deglacial sediments: Where can we find in situ calcareous microfossils to date Grounding Zone Wedges? Scientific Committee on Antarctic Research 2020, Hobart, Tasmania.
- Larter, R., Graham, A., Hogan, K., Minzoni, M., Wåhlin, A., Queste, B., Mazur, A., Boehme, L., Kirkham, V., Fitzgerald, R., Clark, R., Welzenbach, L., Wellner, J., Smith, J., **Simkins, L.M.**, Pettit, E., Nitsche, F., Hillenbrand, C.D., Heywood, K., Anderson, J., and NBP1902 scientific party, 2020, Initial results from International Thwaites Glacier Collaboration cruise, European Geophysical Union.
- Hogan, K., Larter, R., Graham, A., Arthern, R., Kirkham, J.D., Minzoni, R.T., Jordan, T., Clark, R., Fitzgerald, V., Anderson, J.B., Hillenbrand, C.D., Nitsche, F.O., **Simkins, L.M.**, Smith, J.A., Gohl, K., Arndt, J.E., Hong, J., Wellner, J., 2020, Lessons learnt from the former bed of Thwaites Glacier: a new multibeam-bathymetric dataset, European Geophysical Union.

#### PUBLISHED DATASETS (AUTHORED OR BY ADVISEES)

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- Simkins, L.**, Riverman, K., & Stearns, L. (2021) "Circum-Antarctic grounding-line sinuosity" U.S. Antarctic Program (USAP) Data Center. doi: <https://doi.org/10.15784/601484>.
- Simkins, L.**, Anderson, J., Eareckson, E., Greenwood, S., Munevar Garcia, S., & Prothro, L. (2021) "Pennell Trough, Ross Sea bathymetry and glacial landforms" U.S. Antarctic Program (USAP) Data Center. doi: <https://doi.org/10.15784/601474>.
- Hogan, K. A., Larter, R. D., Graham, A. G. C., Nitsche, F. O., Kirkham, J. D., Totten Minzoni, R., Clark, R., Fitzgerald, V., Anderson, J. B., Hillenbrand, C.-D., **Simkins, L.M.**, Smith, J. A., Gohl, K., Arndt, J. E., Hong, J., Heywood, K. J., Abrahamsen, E. P., Thompson, A., Dunbar, R., & Wellner, J. S. (2020). A multibeam-bathymetric compilation for the southern Amundsen Sea shelf, 1999-2019 (Version 1.0). UK Polar Data Centre, Natural Environment Research Council, UK Research & Innovation.

#### SERVICE AT THE UNIVERSITY OF VIRGINIA

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##### Department of Environmental Sciences

- Graduate Academic Review Committee (2021 - present)
- Graduate Admissions Committee (2019 - 2020)
- H.G. Goodell Endowment Committee (2019 - 2020)
- Environmental Science Organization (ESO) Faculty Sponsor (2019 - 2021)
- Undergraduate Seminar (EVSC 4002) Co-chair (2020 - 2021)
- AY 2021-2022 Geology Instructor Hiring Committee (2021)

##### College & Graduate School of Arts and Sciences

- LSAMP Summer Program Panelist (2019, 2020)
- College Science Scholars Seminars (2019, 2020)
- Undergraduate Academic Adviser (2019 - present)
  - 26 students in 2019-2020 academic year*
  - 34 students (+ 6 drop-ins) in 2020-2021 academic year*

##### University



Faculty Mentor, Mentoring Institute, UVA Diversity Programs (2019 - present)  
Native & Indigenous Relations Community Member (2021 - present)  
Native American & Indigenous Studies @ UVA Member (2020 - 2021)  
Meeting with Racial Equity Task Force (2020)  
Undergraduate Research Symposium, Judge (4/2019)  
LSAMP Bridge to Doctorate Mentor, Office for Diversity, Equity, and Inclusion (2019 - 2021)  
LSAMP Virginia-North Carolina Alliance Governing Board (2020-present)  
*Multi-institutional governing board for all LSAMP programs and activities in Virginia and North Carolina under the lead of PI K. McDonald and Co-PI K. Morgan.*

## Other

Letters of support for internship, job, study abroad, and graduate school applications for **24 students since 2019**

## RESEARCH COMMUNITY SERVICE

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**Editorial Service:** Geological Society of London Books Editorial Committee (2018-present)

**Journal Referee:** Journal of Quaternary Research, Geology, GSA Today, Physical Geography, Sedimentary Geology, The Cryosphere, Quaternary Science Reviews, Science Advances, Journal of Geophysical Research: Earth Surface, Geophysical Research Letters, Nature Geoscience, Nature Communications

**Proposal Referee:** NSF Geomorphology and Land-use Dynamics Program, NSF Polar Programs: Antarctic Earth Sciences, NSF Polar Programs: Antarctic Glaciology, National Environmental Research Council (NERC), Programa Polar Português (PROPOLAR)

**Review Panel** NSF Polar Programs (2019, 2020)

**Conference Organization:** WAIS Workshop Organizing Committee (2019-present), AGU Outstanding Student Presentation Awards Judge (2018, 2020), AGU 2018 Grant Review for Global Environmental Change student travel, GSA 2017 Session ‘Glacier and Ice Sheet Grounding Lines,’ GSA 2017 Field Trip Leader ‘Grounding line processes of the southern Cordilleran Ice Sheet: Whidbey Island, Puget Lowlands,’ AGU 2016 Session ‘Geophysical and Geological Records of Glaciated Margins’

Participant in **Unlearning Racisms in Geosciences (URGE)** Glaciology Pod (2021)

Co-founding member of **CryoCommunity**, a resource hub for students and researchers in Cryospheric sciences research (<https://cryocommunity.org/>)

## PUBLIC ENGAGEMENT & SCIENCE EDUCATION

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**Co-leader, Saturday Series Workshops**, free monthly environmentally focused S.T.E.A.M. workshops for upper elementary school students in the Charlottesville-Albemarle area [[link](#)]

**Educational Products:** Glaciers: an introduction to Earth’s icy regions [a workshop lesson plan for upper elementary students, [link](#)]; Antarctic Ice Sheet: Past and Present [an educational module for high-school and introductory college students, [link](#)]

**Climate Feedback Review for Media Outlets:** The Guardian, The Wall Street Journal, The New York Times, USA Today [[link](#)]

**Expert source** on [Diverse Sources](#) and [Cryo-connect](#), both of which connect journalists with expert sources.

**Mass Media Commentary:** [Nature](#), [Popular Science](#), [Phys.org](#), [Mirage News](#), [UVA A&S](#), National Geographic

**Speaker, Nis’to Tribal Youth Organization: Summer 2020 Program**, Lake Traverse Reservation of the Sisseton-Wahpeton Oyate Tribe (NE South Dakota)

**Co-leader, Saturday Series Workshops**, free monthly environmentally focused S.T.E.A.M. workshops for upper elementary school students in the Charlottesville-Albemarle area [\[link\]](#)

**Host, Math4Science Program @ UVA**, class trip for alternative high school students from Brooklyn to learn about math-science integration, research activities, and university life [\[link\]](#)

**Sharing of university teaching materials** with faculty at Piedmont Valley Community College, Stanford University, Georgia Tech, Rutgers, Texas AMU Corpus Christi, Auburn University, University of Washington, Worcester State University

#### PROFESSIONAL ORGANIZATIONS

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Geological Society of America (GSA), American Geophysical Union (AGU), International Glaciology Society (IGS), WAIS Workshop, American Indian Science and Engineering (AISES)

#### FIELD RESEARCH CAMPAGINS

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Puget Lowland, Washington state, 2 weeks in 2020

Puget Lowland, Washington state, 1 week in 2016

Puget Lowland, Washington state, 1 week in 2015

Ross Sea, Antarctica, 8 weeks in 2015

Antarctic Peninsula, Antarctica, 6 weeks in 2010