

LUCILLE BAKER-STAHL

Department of Earth and Atmospheric Sciences • University of Houston
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Education

- 2023-present** **University of Houston, Houston, TX.** Ph.D. in Geology (Expected Spring 2027)
Thesis chapters: The rheology of near-surface frozen and freeze-thawed fine-grained sediments; Modeling the effects of thaw and precipitation on landslide hazard in frozen hillslopes; Investigating the effects of buoyant freshwater plumes on estuarine sediment transport in a proglacial Arctic fjord; Physical and numerical modeling of incipient channelization in permafrost
Advisor: Dr. Brandee N. Carlson; Committee: Dr. Behrooz Ferdowsi, Dr. Will Struble, Dr. Julia Wellner
- 2019-2023** **Carleton College, Northfield, MN.** Bachelor of Arts in Geology, received June 2023.
Senior Undergraduate Thesis: The Hidden Falls Member: Lithostratigraphy and Depositional Insights into the Platteville Formation, Southeastern Minnesota
Advisors: Dr. Clint A. Cowan, Dr. Bereket Haileab

Field and Research Experience

- 2024, 06-08** **2-month Summer Field Season, Kangerlussuaq, Greenland.** Terrestrial and ship based sampling of sediment, water, and soil. Collecting active remote sensing data in lacustrine, fluvial, and marine environments. Development and deployment of moored sensor arrays in a fluvial system. Mapping, sampling, and description of active layer detachment landslides in permafrost.
- 2023, 07-08** **2.5-week Summer Field Season, Kangerlussuaq, Greenland.** Terrestrial and ship based sampling of sediment and water and collecting active remote sensing data of lacustrine and marine environments.
- 2023, 01-04** **Geology in New Zealand Program.** Carleton College, Department of Geology. 10 Week Field Camp studying the geology of New Zealand's North and South islands.
- 2022, 11-12** **Undergraduate Research Assistant.** Digitized and standardized a mineralogy/petrology collection for open access. Supervisor Dr. Bereket Haileab. Carleton College.
- 2022, 05-09** **Independent Undergraduate Researcher.** Mapped the stratigraphy of outcrops across Southeastern Minnesota and collected samples. Performed geochemical analysis to study regional carbonate diagenesis. Techniques: SEM, EDS, CL, pXRF.

Teaching Experience

- 2023-Present** **Graduate Teaching Assistant.** University of Houston, Department of Earth and Atmospheric Sciences. Courses instructed: Historical Geology; Geologic Field Methods; Stratigraphy; Geomorphology.
- 2024, 09** **Lead Instructor.** University of Houston, Department of Earth and Atmospheric Sciences. Course instructed: Stratigraphy—sole instructor for lab and lecture.
- 2022, 08-11** **Undergraduate Teaching Assistant.** Carleton College, Department of Geology. Course instructed: Introduction to Field Geology.
- 2022, 06-07** **SLAI Teaching Assistant.** Carleton College Summer Liberal Arts Institute. Course instructed: Building Connections in STEM, Geology Component.
- 2021, 08-11** **Undergraduate Teaching Assistant.** Carleton College, Department of French and Francophone Studies. French Study Center Consultant.

Grants and Fellowships

- 2025, 06-12** **Evans Family Short-Term Graduate Student Fellowship - \$15,000.** Dartmouth College, Changing Polar Regions Academic Cluster.
- 2024, 03** **Student Research Grant - \$1,250.** University of Houston, Department of Earth and Atmospheric Sciences.
- 2023-2024** **Presidential Fellowship - \$4,000.** University of Houston.
- 2022, 03** **Independent Research Fellowship - \$5,000.** Carleton College.

Awards and Honors

- 2024** **First Place.** Robert E. Sheriff Lecture Student Poster Competition Advanced Ph.D. in Geology Category
- 2023** **Honorable Mention.** American Geophysical Union Outstanding Student Presentation Award
- 2023** **Honorable Mention.** National Science Foundation Graduate Research Fellowship

Service

- 2025** **AGQ Behind the Scenes Team Member.** American Geophysical Union LGBTQ+ Affinity Community
- 2023** **Student Departmental Advisor.** Carleton College, Department of Geology. Faculty nominated liaison for department community and feedback.
- 2021-2024** **Student Board Member.** Out After Carleton Board. Invited student representative of LGBTQIA+ alumni association.

Publications

- In Prep** Baker-Stahl, L.* , Carlson, B.N., Ferdowsi, B., Adhikari, K., Farley, M., Bechtel, B., Schwindack, L.. (Expected submission 02, 2025) The rheology of frozen and freeze-thawed fine-grained sediments. *Geophysical Research Letters*.

Selected Conference Presentations

- 2024** Baker-stahl, L.* , Carlson, B. N., Ferdowsi, B., Bechtel, B., & Schwindack, L. (2024, December 10). *EP21B-04 Modeling cohesion and landslide hazard in frozen hillslopes from laboratory rheology experiments*. [Talk]. American Geophysical Union, Washington, DC. <https://agu.confex.com/agu/agu24/meetingapp.cgi/Paper/1645463>
- 2024** Baker-stahl, L.* , Carlson, B. N., Ferdowsi, B., Bechtel, B., & Schwindack, L. (2024, August 15). *#5 A Rheological Explanation for Delta Lip Instability in Kangerlussuaq, Greenland*. [Poster Presentation]. Deltas 2024 Science Symposium: Coastal Rivers in a Changing World, Mississippi River Delta Transition Initiative, Baton Rouge, LA. <https://static1.squarespace.com/static/65ac53e36d90da4f19f31721/t/66b663378cbc4f24ebfe7429/1723228983302/DRAFT+Abstract+Information.pdf>
- 2023** Baker-stahl, L.* , Carlson, B. N., Ferdowsi, B., Bechtel, B., & Schwindack, L. (2023, December 11). *EP13E-1809 A Rheological Explanation for Delta Lip Instability in Kangerlussuaq, Greenland*. [Poster Presentation]. American Geophysical Union, San Francisco, CA. <https://agu.confex.com/agu/fm23/meetingapp.cgi/Paper/1358534>
- 2023** Baker-stahl, L.* (2023, May 4). *The Hidden Falls Member: Lithostratigraphy and Depositional Insights Into the Platteville Formation, Southeastern Minnesota*. [Lightning Talk and Poster Presentation]. Geological Society of America, North Central Section, Grand Rapids, MI. <https://gsa.confex.com/gsa/2023NC/meetingapp.cgi/Paper/386230>