

Kristin Poinar

kpoinar@buffalo.edu

(716) 645-4286

ubwp.buffalo.edu/glaciermodelinglab

University at Buffalo

Department of Geology and Research & Education in
eNergy, Environment, & Water (RENEW) Institute
Buffalo, NY 14260

Education

Ph.D. in Geophysics	University of Washington, Seattle	December 2015
Graduate Certificate in Climate Science	UW Program on Climate Change	October 2015
B.S. in Physics and B.A. in English	Case Western Reserve University	May 2007

Professional Experience

Assistant Professor <i>Department of Geology and RENEW Institute</i>	SUNY University at Buffalo Jan. 2018 – present
NASA Postdoctoral Fellow <i>Greenland Ice Sheet hydrology; Advisor: Sophie Nowicki</i>	NASA Goddard Space Flight Center Jan. 2016 – Dec. 2017
Research Assistant <i>Numerical modeling of ice sheet thermodynamics; Advisor: Ian Joughin</i>	University of Washington 2007–2015

Publications (Also listed on my [Google Scholar](#) page) (*graduate student advisee)

- J. Briner, C. Walcott, J. Schaefer, N. Young, J. MacGregor, **K. Poinar**, B. Keisling, S. Anandakrishnan, M. Albert, T. Kuhl, & G. Boeckmann, 2022. “Drill site selection for cosmogenic nuclide exposure dating of the bed of the Greenland Ice Sheet”. *The Cryosphere*, doi:10.5194/egusphere-2022-264.
- C. Trunz*, M. Covington, **K. Poinar**, L. Andrews, J. Mejía, & J. Gulley, 2022. “Modeling the impact of moulin shape on englacial hydrology”. *Journal of Geophysical Research*, doi:10.1029/2022JF006674.
- L. Andrews, **K. Poinar**, & C. Trunz*, 2022. “Controls on Greenland moulin geometry and evolution from the Moulin Shape model”. *The Cryosphere* 16, 2421–2448, doi:10.5194/tc-16-2421-2022.
- C. Sbarra, J. Briner, B. Graham, **K. Poinar**, E. Thomas, & N. Young, 2022. “Evidence for a more extensive Greenland Ice Sheet in southwestern Greenland during the Last Glacial Maximum”. *Geosphere* 18(4), 1316–1329, doi:10.1130/GES02432.1.
- K. Poinar** & L. Andrews, 2021. “Challenges in predicting Greenland supraglacial lake drainages at the regional scale.” *The Cryosphere* 15, 1455–1483, doi:10.5194/tc-15-1455-2021.
- J. Sperhac, **K. Poinar**, R. Jones-Ivey, E. Snitzer, J. Briner, B. Csatho, S. Nowicki, E. Simon, & A. Patra, 2021. “GHub: Building a glaciology gateway to unify a community.” *Concurrency and Computation: Practice and Experience* Special Issue “Human oriented solutions for intelligent analysis, multimedia and communication systems: Science Gateways 2020”, doi:10.1002/cpe.6130.
- K. Poinar**, C. Dow, & L. Andrews, 2019. “Long-term support of an active subglacial hydrologic system in Southeast Greenland by firn aquifers.” *Geophysical Research Letters*, doi:10.1029/2019GL082786.
- C. Dow, W. S. Lee, J. Greenbaum, D. Blankenship, C. Greene, **K. Poinar**, A. Forrest, D. Young, & C. Zappa, 2018. “Basal Channels Drive Active Ice-Shelf Hydrology and Fracture.” *Science Advances* 4(6), doi:10.1126/sciadv.aao7212.

K. Poinar, I. Joughin, D. Lilien, L. Brucker, L. Kehrl, & S. Nowicki, 2017. “Drainage of Southeast Greenland Firn-Aquifer Water through Crevasses to the Bed.” *Frontiers in Earth Science* Special Issue “Melt Water Retention Processes in Snow and Firn on Ice Sheets and Glaciers: Observations and Modeling” 5, 8–15. doi:10.3389/feart.2017.00005.

K. Poinar, I. Joughin, J. Lenaerts, & M. van den Broeke, 2016. “Englacial Latent-Heat Transfer Has Limited Influence on Seaward Ice Flux in Western Greenland.” *Journal of Glaciology* 62(235). doi:10.1017/jog2016.103.

D. Shapero, I. Joughin, **K. Poinar**, M. Morlighem, F. Gillet-Chaulet, 2016. “Basal Resistance for Three of the Largest Greenland Outlet Glaciers.” *Journal of Geophysical Research* 121, 1–13. doi:10.1002/2015JF003643.

K. Poinar, I. Joughin, S. Das, M. Behn, J. Lenaerts, & M. van den Broeke, 2015. “Limits to Future Expansion of Surface-Melt-Enhanced Ice Flow Into the Interior of Western Greenland.” *Geophysical Research Letters* 42(6), 1800–1807. doi:10.1002/2015GL063192.

Non-peer-reviewed academic contributions

J. Sperhac, **K. Poinar**, R. Jones-Ivey, E. Snitzer, J. Briner, B. Csatho, S. Nowicki, E. Simon, & A. Patra, 2019. “GHub: Building a Glaciology Gateway to Unify a Community”. *Gateways 2019*. doi:10.17605/OSF.IO/JGHBZ.

K. Poinar, J. Lamp, A. Balter, C. Gustafson, P. Spector, D. Winebrenner, & S. Tulaczyk, 2019. “Subglacial Access Working Group: Access Drilling Priorities in Greenland.” A white paper drafted for the U.S. Ice Drilling Program.

J. Briner, R. Alley, M. Bender, B. Csatho, **K. Poinar**, & J. Schaefer, 2017. “How stable is the Greenland Ice Sheet?” White paper from NSF workshop. hdl.handle.net/10477/82467.

R. Schnee, Z. Ahmed, S. Golwala, D. Grant, & **K. Poinar**, 2007. “Screening Surface Contamination with BetaCage.” *American Inst. of Physics Conf. Procs.* 897(20). doi:10.1063/1.2722063.

Publications submitted or in review (*grad student advisee, **undergrad advisee, †postdoc advisee)

E. Cicero**, **K. Poinar**, R. Jones-Ivey, J. Sperhac, A. Petty, & J. Briner. “Firn aquifer water discharges into crevasses across Southeast Greenland”, in revision at *Journal of Glaciology*.

C. Trunz*, **K. Poinar**, L. Andrews, M. Covington, J. Mejía†, J. Gulley, & V. Siegel. “Observed and modeled moulin heads in the Pâkitsoq region of Greenland suggest subglacial channel network effects,” in revision at *The Cryosphere*. doi:10.5194/tc-2022-182.

K. Poinar. “Seasonal flow types of glaciers in Sermilik Fjord, Greenland, over 2016–2021,” in revision at *Journal of Geophysical Research*. doi:10.31223/X5R93G.

A. Sommers, C. Meyer, M. Morlighem, H. Rajaram, **K. Poinar**, W. Chu, & J. Mejía†. “Subglacial hydrology modeling predicts high winter water pressure and spatially variable transmissivity at Helheim Glacier, Greenland,” in revision at *Journal of Glaciology*. doi:10.31223/X5RD24.

Research Funding *(projects where I am PI or institutional PI; projects where I am Co-I are not listed)*

Data fusion for mass-change measurements over complex ice surfaces <i>PI for \$180,632 award to University at Buffalo</i>	NASA Decadal Survey Initiative (DSI) 2022–2025
Follow the water: Hydrology of Helheim Glacier <i>PI of \$770,238 award to University at Buffalo</i>	Heising-Simons Foundation 2020–2024
Physically based and stochastic models for Greenland moulin formation, longevity, and spatial distribution <i>PI of \$295,221 award to University at Buffalo</i>	NASA Cryospheric Sciences 2018–2021
Probing sub-ice sediments using geophysical surveys to understand the response of Alaska and Greenland glaciers to climate change <i>PI of \$35,000 internal award</i>	Univ. Buffalo RENEW SEED 2018–2019
NASA Postdoctoral Fellowship	NASA Postdoctoral Program (NPP) 2016–2017
NSF Graduate Research Fellowship <i>Only 913 awards in 2008, compared to >2000/year from 2009–present</i>	National Science Foundation 2008–2011
Support of Undergraduate Research and Creative Endeavors (SOURCE) award \$3,000 internal funding	Case Western Reserve University 2006

Student & Postdoc Advising

MS thesis advisor for Donglai Yang (expected 2023), Joshua Charlton (2021), Jeremy Stock (2020)

PhD thesis advisor for Naureen Khan (expected 2025), Courtney Shafer (expected 2025)

Host for Celia Trunz, Univ. Arkansas PhD student visiting UB 2019–2020 academic year (PhD 2021)

Postdoctoral advisor for Dr. Jessica Mejía (2021–present)

Research supervisor for undergraduate students Hannah Ambrosino, Eric Cicero, & Leah Bargnesi (BS 2022), and Zaw Win “Francis” Naung (BS 2020)

Thesis committee member for ~7 past and current PhD students and ~7 research MS students

Service *(selected subset)*

Scientific Editor <i>An open-access European Geophysical Union journal, impact factor 5.7</i>	The Cryosphere 2021–present
Volunteer working group member <i>Distributed Active Archive Center (DAAC) User Working Group</i>	National Snow & Ice Data Center 2019–present
EarthScope Consortium representative <i>Geophysics research consortium (formerly UNAVCO and IRIS)</i>	University at Buffalo 2022–present

About the Design

This CV is created from a [L^AT_EX](#) template by M. Boedicker, modified by D.Hildreth, and adapted by me under the Creative Commons Attribution – NonCommercial – ShareAlike (CC BY-NC-SA) License.