Kristin Poinar

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University at Buffalo
Department of Geology *and*
Research and 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 — SUNY University at Buffalo
Department of Geology and RENEW Institute — *Jan. 2018 – present*

NASA Postdoctoral Fellow — NASA Goddard Space Flight Center
Greenland Ice Sheet hydrology; Advisor: Sophie Nowicki — *Jan. 2016 – Dec. 2017*

Research Assistant — University of Washington
Numerical modeling of ice sheet thermodynamics; Advisor: Ian Joughin — *2007–2015*

Publications (*Also listed on my Google Scholar page)*

J. M. Sperhac, **K. Poinar**, R. Jones-Ivey, E. Snitzer, J. Briner, B. Csatho, S. Nowicki, E. Simon, and A. Patra. "GHub: Building a glaciology gateway to unify a community." *Concurrency and Computation: Practice and Experience*, doi:10.1002/cpe.6130.

K. Poinar and L. C. Andrews, 2020. "Challenges in predicting Greenland supraglacial lake drainages at the regional scale." *The Cryosphere Discussions*, doi:10.5194/tc-2020-251.

K. Poinar, C. F. Dow, and L. C 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. F. Dow, W. S. Lee, J. Greenbaum, D. Blankenship, C. Greene, **K. Poinar**, A. Forrest, D. Young, and 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, and 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.2016.90005.

K. Poinar, I. Joughin, J. T. M. Lenaerts, and M. R. van den Broeke, 2016. "Englacial Latent-Heat Transfer Has Limited Influence on Seaward Ice Flux in Western Greenland." *Journal of Glaciology* 62(235), 1–16. 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." *J. Geophys. Res.* 121, 1–13. doi:10.1002/2015JF003643.

K. Poinar, I. Joughin, S. B. Das, M. D. Behn, J. T. M. Lenaerts, and M. R. 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. M. Sperhac, **K. Poinar**, R. Jones-Ivey, E. Snitzer, J. Briner, B. Csatho, S. Nowicki, E. Simon, and A. Patra, 2019. "GHub: Building a Glaciology Gateway to Unify a Community". *Gateways 2019*, San Diego. doi:10.17605/OSF.IO/JGHBZ.

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

J. P. Briner, R. B. Alley, M. L. Bender, B. Csatho, **K. Poinar**, and J. M. Schaefer, 2017. "How stable is the Greenland Ice Sheet?" A white paper nucleated from an eponymous NSF-sponsored workshop. hdl.handle.net/10477/82467.

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

Research Funding

Follow the water: Hydrology of Helheim Glacier — Heising-Simons Foundation
$770,238 award to University at Buffalo — *2020–2023*

Physically based and stochastic models for Greenland moulin formation, longevity, and spatial distribution — NASA Cryospheric Sciences
$295,221 award to University at Buffalo — *2018–2021*

Probing sub-ice sediments using geophysical surveys to understand the response of Alaska and Greenland glaciers to climate change — Univ. Buffalo RENEW SEED
$35,000 internal award — *2018–2019*

NASA Postdoctoral Fellowship — NASA Postdoctoral Program (NPP)
~$200,000 over two years — *2016–2017*

NSF Graduate Research Fellowship — National Science Foundation
$123,000 over three years — *913 awards made in 2008; compare to >2000/yr from 2009 on* — *2008–2011*

Support of Undergraduate Research and Creative Endeavors (SOURCE) award — Case Western Reserve University
~$3,000 over a summer; internal funding for wages and supplies — *2006*

University Teaching

University at Buffalo

GLY 102	Climate Change	Spring 2018–2020
GLY 427 / 527	Statistics and Modeling of Geologic Data	Fall 2018, 2020
GLY 447 / 547	Glaciology	Fall 2019

University of Washington

ESS 431 / 505	Principles of Glaciology (TA and lecturer)	2012–2015

Colorado College

EV 128	Intro. to Global Climate Change (Co-Instructor)	Winter 2014

Student Advising

Master's of Science thesis advisor for Jeremy Stock (MS 2020), Joshua Charlton (MS 2021)

Host of Celia Trunz, University of Arkansas PhD student (visited UB for 2019–2020 academic year)

Outreach and Public Speaking (subset)

Capital Science Evening Lectures — Carnegie Science Institute, DC
Lecture available at carnegiescience.edu/greenland — *February 2020*

Buffalo Pint of Science — Buffalo, NY
"The 20 million years when Earth was an ice planet" — *May 2019*

Friday Nights at Cary public lecture — Cary Institute of Ecosystem Studies, NY
"Meltwater on, in, and under the Greenland Ice Sheet" — *February 2018*

TED talk: "What's hidden beneath the Greenland Ice Sheet?" — TED2017, Vancouver
Invited speaker in the "Planet, Protection" session — *April 2017*

Service (subset)

Manuscript reviewer for *The Cryosphere, Current Climate Change Reports, Geophysical Research Letters, GIScience & Remote Sensing, Journal of Geophysical Research, Journal of Glaciology, Nature Geoscience, Science Advances, Water Resources Research*

Proposal panelist and *ad hoc* reviewer for particular NASA, NSF, and international programs

Volunteer working group member — National Snow & Ice Data Center
Distributed Active Archive Center (DAAC) User Working Group — *2019–present*

Scientific Writing Workshop: Essential Skills for Earth Scientists — AGU Fall Meeting
Contributor to workshop organized by LetPub — *December 2020*

Outstanding Student Presentation Award (OSPA) judge — AGU Fall Meeting
I judge ∼5–12 student presentations annually with detailed constructive feedback — *2016–2020*

Session convener — AGU Fall Meeting
Various sessions within the Cryosphere section — *2017–2019*

Group Reviewer,
Special Report on Ocean & Cryosphere in a Changing Climate — APECS / IPCC
Chapter 4: "Sea Level Rise & Implications for Low Lying Islands" — *May–June 2018*

Climate and Earth system science labs — UW in the High School
Visualizing our past climate using high-resolution geospatial data — *October 2014*

Classroom lessons, laboratory, and field trip — Northeast Seattle schools
Past, present, and future climate of Puget Sound; Glacier flow and erosion — *2013–2014*

Affiliations

American Geophysical Union (AGU)
International Glaciological Society (IGS)
Earth Science Women's Network (ESWN)
Association of Polar Early-Career Scientists (APECS)
Interagency Arctic Research Policy Committee (IARPC)
American Assoc. for Advancement of Science (AAAS)

About the Design

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