

Timothy C. Bartholomaus

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Education

2013	Ph.D.	Geophysics	University of Alaska Fairbanks
2007	M.S.	Geological Sciences	University of Colorado Boulder
2002	A.B.	Earth Sciences	Dartmouth College

Professional Positions

2017 – present	Assistant Professor, Department of Geological Sciences, University of Idaho
2016 – 2017	Assistant Professor, Department of Geography, University of Idaho
2015 – 2016	Research Associate, Institute for Geophysics, University of Texas at Austin
2014 – 2015	Postdoctoral Fellow, Institute for Geophysics, University of Texas at Austin
2009 – 2013	Research Assistant, Geophysical Institute, University of Alaska Fairbanks
2007 – 2012	Instructor, Alaska Wildlands Studies Summer Program, McCarthy, Alaska
2007 – 2008	Senior Staff Geomorphologist, Balance Hydrologics, Inc., Berkeley, Calif.
2005 – 2007	Research and Teaching Assistant, Institute of Arctic and Alpine Research and Department of Geological Sciences, University of Colorado – Boulder
2002 – 2005	Staff Geologist, Aspect Consulting, LLC, Seattle, Wash.

Refereed Publications

* denotes graduate student author substantially mentored by Bartholomaus

18. Spagnolo, M., **T. C. Bartholomaus**, C. D. Clark, C. R. Stokes, N. Atkinson, J. A. Dowdeswell, J. C. Ely, A. G. C. Graham, K. A. Hogan, E. C. King, R. D. Larter, S. J. Livingstone, and H. D. Pritchard (2017), The periodic topography of ice stream beds: Insights from the Fourier spectra of mega-scale glacial lineations, *Journal of Geophysical Research – Earth Surface*, 122, doi:10.1002/2016JF004154.
17. Jackson, R. H., E. L. Shroyer, J. D. Nash, D. A. Sutherland, D. Carroll, M. J. Fried, G. A. Catania, **T. C. Bartholomaus**, and L. A. Stearns (2017), Near-glacier surveying of a subglacial discharge plume: Implications for plume parameterizations, *Geophysical Research Letters*, 44, 6886–6894, doi:10.1002/2017GL073602.
16. Felikson*, D., **T. C. Bartholomaus**, G. A. Catania, N. J. Korsgaard, K. H. Kjær, M. Morlighem, B. Noël, M. van den Broeke, L. A. Stearns, E. L. Shroyer, D. A.

- Sutherland, and J. D. Nash (2017), Inland thinning on the Greenland ice sheet controlled by outlet glacier geometry, *Nature Geoscience*, 10, 366-369, doi: 10.1038/NCEO2934.
15. Durkin, W. J., **T. C. Bartholomaus**, M. J. Willis, and M. E. Pritchard (2017), Dynamic changes at Yahtse Glacier, the most rapidly advancing tidewater glacier in Alaska, *Frontiers in Earth Science - Cryospheric Sciences*, 5(21), doi: 10.3389/feart.2017.00021.
 14. Enderlin, E. M., G. S. Hamilton, S. O'Neel, **T. C. Bartholomaus**, M. Morlighem, and J. W. Holt (2016), An Empirical Approach for Estimating Stress-Coupling Lengths for Marine-Terminating Glaciers, *Frontiers in Earth Science - Cryospheric Sciences*, 4(104), doi: 10.3389/feart.2016.00104.
 13. Carroll, D., D. A. Sutherland, B. Hudson, T. Moon, G. A. Catania, E. L. Shroyer, J. D. Nash, **T. C. Bartholomaus**, D. Felikson, L. A. Stearns, B. P. Y. Noël, and M. R. van den Broeke (2016), The impact of glacier geometry on meltwater plume structure and submarine melt in Greenland fjords, *Geophysical Research Letters*, 43, doi:10.1017/aog.2016.19.
 12. **Bartholomaus, T. C.**, L. A. Stearns, D. A. Sutherland, E. L. Shroyer, J. D. Nash, R. Walker, G. Catania, D. Felikson, D. Carroll, M. J. Fried, B. Noël, and M. van den Broeke (2016), Contrasts in the response of adjacent fjords and glaciers to surface melt in western Greenland, *Annals of Glaciology*, 57(73), 25-38, doi:10.1017/aog.2016.19.
 11. Gimbert, F., V. C. Tsai, J. M. Amundson, **T. C. Bartholomaus**, and J. I. Walter (2016), Sub-seasonal pressure, geometry and sediment transport changes observed in subglacial channels, *Geophysical Research Letters*, 43, 3786-3794, doi:10.1002/2016GL068337.
 10. Brinkerhoff, D., C. R. Meyer, E. Bueler, M. Truffer, and **T. C. Bartholomaus** (2016), Inversion of a glacier hydrology model, *Annals of Glaciology*, 57(72), 84-95, doi:10.1017/aog.2016.3.
 9. **Bartholomaus, T. C.**, C. F. Larsen, M. E. West, S. O'Neel, E. C. Pettit, and M. Truffer (2015), Tidal and seasonal variations in calving flux observed with passive seismology, *Journal of Geophysical Research – Earth Surface*, 120, 2318–2337, doi:10.1002/2015JF003641.
 8. Fried*, M., G. A. Catania, **T. C. Bartholomaus**, D. Duncan, M. Davis, L. A. Stearns, J. Nash, E. Shroyer, and D. Sutherland (2015), Distributed subglacial discharge drives significant submarine melt at a Greenland tidewater glacier, *Geophysical Research Letters*, 42, 9328–9336, doi:10.1002/2015GL065806.
 7. **Bartholomaus, T. C.**, J. M. Amundson, J. I. Walter, S. O'Neel, M. E. West, and C. F. Larsen (2015), Subglacial discharge at tidewater glaciers revealed by seismic tremor, *Geophysical Research Letters*, 42, 6391-6398, doi:10.1002/2015GL064590.
 6. J. A. Åström, D. Vallot, M. Schäfer, E. Z. Welty, S. O'Neel, **T. C. Bartholomaus**, Y. Liu, T.I. Riikilä, J. Timonen, T. Zwinger, and J.C. Moore (2014), Termini of calving glaciers as self-organised critical systems, *Nature Geoscience*, 7, 874-878, doi:10.1038/ngeo2290.
 5. **Bartholomaus, T. C.**, C. F. Larsen, and S. O'Neel (2013), Does calving matter? Evidence for significant submarine melt, *Earth and Planetary Science Letters*, 380, 21-30, doi:10.1016/j.epsl.2013.08.014.
 4. E. Welty, **T. C. Bartholomaus**, S. O'Neel, and W. T. Pfeffer (2013), Cameras as clocks, *Journal of Glaciology*, 59(214), 275-286, doi: 10.3189/2013JoG12J126.
 3. **Bartholomaus, T. C.**, C. F. Larsen, S. O'Neel, and M.E. West (2012), Calving seismicity from iceberg-sea surface interactions, *Journal of Geophysical Research – Earth Surface*, 117, F04029, doi:10.1029/2012JF002513.

2. **Bartholomaus, T. C.**, R. S. Anderson, and S. P. Anderson (2011), Growth and collapse of the distributed subglacial hydrologic system of Kennicott Glacier, Alaska, USA, and its effects on basal motion, *Journal of Glaciology*, 57(206), 985-1002, doi:10.3189/002214311798843269.
1. **Bartholomaus, T. C.**, R. S. Anderson, and S. P. Anderson (2008), Response of glacier basal motion to transient water storage, *Nature Geoscience*, 1(1), 33-37, doi:10.1038/ngeo.2007.52.

Non-Refereed Publications

- Bartholomaus, T.C.** and J.N. Bassis (2014), Progress and challenges to understanding iceberg calving around the Greenland Ice Sheet. *Variations* (invited contribution to the quarterly newsletter of the U.S. CLIVAR program) 12(2), 40-45.
- Bartholomaus, T.C.**, (2012), A glacier's warm water bath. *Global Glimpses* (annual newsletter of the UAF Center for Global Change) 19(1), 6-8.
- Bartholomaus, T.C.**, (2012), Kennicott Glacier: A laboratory for the study of pulsed water delivery to the glacier bed. *Field guide for the Fairbanks-Valdez post-IGS symposium excursion*, 30 June – 3 July.
- Bartholomaus, T.C.**, (2010), Glaciology Wrangell Mountains Center-style. *Hardware Store Herald* (publication of the Wrangell Mountains Center, McCarthy, AK), Winter 2010/11.
- Bartholomaus, T.C.**, (2008), Midnight glacier hikes; “Backstory” to Bartholomaus et al., (2008). *Nature Geoscience*, 1(1), E1.
- Bartholomaus, T.C.**, R.S. Anderson, S.P. Anderson, and A.J. Vonesh, (2006), WMC hosts glacier sliding research. *Hardware Store Herald* (publication of the Wrangell Mountains Center, McCarthy, AK), Winter 2006/07.
- Bartholomaus, T.C.**, R.S. Anderson, and S.P. Anderson, (2006). Flowing and sliding: making use of the Hidden Creek Lake flood through the Kennicott Glacier. *Wrangell-St. Elias News*, McCarthy, AK, Summer 2006.

Awards and Fellowships

- University of Texas Institute for Geophysics
Outstanding Young Researcher Award, 2015
- University of Texas Institute for Geophysics
UTIG Director’s Circle of Excellence, 2015
- University of Texas Institute for Geophysics
Postdoctoral Fellowship, 2014 – 2015 (\$120,000/2 yrs)
- American Geophysical Union, Cryosphere Group
Outstanding Student Paper Award, 2013 Fall Meeting (\$200)
Outstanding Student Paper Award, 2012 Fall Meeting (\$200)
Outstanding Student Paper Award, 2006 Fall Meeting (\$100)
- University of Alaska Fairbanks Department of Geology and Geophysics
Peter MacKeith Memorial Scholarship, 2011 (\$1,000)
- Recent grants in support of conference travel:
WCRP Climate and Cryosphere (CliC) Project, 2016 (\$430)
Incorporated Research Institutions of Seismology (IRIS), 2016 (\$800)
International Arctic Science Committee (IASC), 2014 (\$1,280)

UCAR/CLIVAR, 2013	(\$700)
University of Alaska Fairbanks Graduate School, 2013	(\$1,000)
UNAVCO, 2012	(\$1,650)
International Glaciological Society, 2011	(\$1,400)
UAF Geophysical Institute, 2010	(\$1,000)

Antarctic Service Medal, 2009

Research Grants

Principal Investigator unless otherwise indicated

In preparation for *National Science Foundation – Arctic Natural Sciences*, “Collaborative Research: Sediment and stability: Quantifying the effect of moraine building on Greenland tidewater glaciers”

In preparation for *National Science Foundation – Geomorphology and Land Use Dynamics*, “Quantifying the environmental controls on iceberg calving across a glaciated arc using Alaskan seismic data”

Awarded grant applications

Funded by *National Science Foundation – Arctic Natural Sciences*, “Collaborative Research: What controls calving? A Greenland-wide test of terminus change mechanisms,” Grant Number 1716865, PI: Timothy Bartholomaus, 2017-2020 (\$140,234)

Funded by *NASA – Goddard Space Flight Center*, “Calving law validation for the Greenland Ice Sheet,” Grant Number NNX17AJ99G, PI: Timothy Bartholomaus, 2017-2018 (\$77,714)

Funded by *University of Idaho Seed Grant Program*, “High resolution seismic analyses of subglacial water storage,” PI: Timothy Bartholomaus, 2017 (\$11,936)

Funded by *University of Alaska Center for Global Change*, “Physical oceanography and tidewater glacier dynamics at Yahtse Glacier, Alaska,” PI: Timothy Bartholomaus, 2010 (\$13,300)

Funded by *Geological Society of America*, “Supraglacial channel meanders as an analog for fluvial bedrock erosion,” PI: Timothy Bartholomaus, 2006 (\$2,000)

Funded by *University of Colorado Boulder Department of Geological Sciences, Beverly Sears Graduate Student Research Grant*, “Testing theories of wave ogive formation, Gates Glacier, Alaska,” PI: Timothy Bartholomaus, 2006 (\$996)

Funded by *University of Colorado Boulder Department of Geological Sciences, Shell Oil Graduate Student Research Grant*, “Testing theories of wave ogive formation, Gates Glacier, Alaska,” PI: Timothy Bartholomaus, 2006 (\$2,200)

Declined grant applications

Declined by *NASA – Studies with IceSat and CryoSat-2*, “Understanding the Evolving Geometry of Outlet Glaciers in Greenland,” Co-I with PI: Ginny Catania, 2016 (UI portion: \$159,947)

Declined by *National Science Foundation – Antarctic Glaciology*, “Collaborative Research: Understanding Peripheral Antarctic Ice Sheet Change,” Co-I with PI: Ginny Catania, 2016 (UI portion: \$244,111)

Declined by *National Science Foundation – Arctic Natural Sciences*, “LOSS: Linking Outlet glacier dynamics with Sedimentation and Submarine geometry in Greenland,” Co-I with PI: Rodrigo Fernandez, 2015 (UT total: \$1,732,490)

Invited Seminars, Panel Discussions and Abstracts

- 2018 **University of Washington**, Department of Earth and Space Sciences seminar, Seattle, Wash.
- 2017 **International Summer School in Glacier Seismology Instructor**, hosted at Colorado State University, Fort Collins, Colo.
EGU Galileo Conference, Environmental Seismology, Ohlstadt, Germany
- 2016 **Boise State University**, Department of Geosciences seminar, Boise, Idaho
IRIS National Workshop, Vancouver, Wash.
University of Oregon, Department of Geological Sciences seminar, Eugene, Ore.
Columbia University, Lamont-Doherty Earth Observatory seminar, Palisades, N.Y.
The University of Texas at Austin, Department of Geological Sciences seminar, Austin, Texas
University of Idaho, Department of Geography seminar, Moscow, Idaho
- 2015 **AGU**, Annual Fall Meeting, San Francisco, Calif., (Two abstracts)
EarthScope National Meeting, Stowe, Vt.
Stanford University, Geophysics Department seminar, Stanford, Calif.
St. Louis University, Department of Earth and Atmospheric Science seminar, St. Louis, Mo.
- 2014 **AGU**, Annual Fall Meeting, San Francisco, Calif.
International Arctic Science Committee (IASC), Panelist for workshop on “Priorities for Greenland Ice Sheet/Ocean Interaction research,” Bremerhaven, Germany
NSF/NASA, Panelist for workshop on “Instrumentation for Polar Glaciology and Geophysics Research,” Baltimore, Md.
Purdue University, Department of Earth, Atmospheric and Planetary Science seminar, Lafayette, Ind.
The University of Texas at Austin, Institute for Geophysics seminar, Austin, Texas
- 2012 **UNAVCO**, Bi-Annual Science Workshop, Boulder, Colo.

Conference and Seminar Presentations

* denotes undergraduate author mentored by Bartholomaus

† presenting author

- 2018 Felikson, D., G. Catania, **T. C. Bartholomaus**, and M. Morlighem, Glacier bed knickpoints limit inland thinning around the Greenland Ice Sheet. *Program for Arctic Regional Climate Assessment (PARCA) Annual Meeting*, NASA Goddard, Greenbelt, Maryland, 23 Jan. (talk)

- Bartholomaus, T. C.**, Understanding fast glacier change: Revealing the processes at glacier beds and tidewater glacier termini. *Department of Earth and Space Sciences, University of Washington, Seattle, Wash.*, 4 Jan. (seminar)
- 2017 **Bartholomaus, T. C.**, C. R. Labeledz, J. M. Amundson, F. Gimbert, V. C. Tsai, M. E. Vore, and M. S. Karplus, Spatio-temporal evolution of efficient subglacial water discharge at Lemon Creek Glacier, Alaska. Abstract C41D-1270 presented at *2017 Fall Meeting, AGU, San Francisco, Calif.*, 11 – 15 Dec. (poster)
- Vore, M. E. and **T. C. Bartholomaus**, Locating and Monitoring Subglacial Conduits Through Glaciohydraulic Tremor Amplitudes and Wave Polarization. Abstract C34B-04 presented at *2017 Fall Meeting, AGU, San Francisco, Calif.*, 11 – 15 Dec. (talk)
- Labeledz, C. R., **T. C. Bartholomaus**, F. Gimbert, J. M. Amundson, M. E. Vore, M. S. Karplus, and V. C. Tsai, Seismic observations of subglacial water discharge from glacier-dammed lake drainage at Lemon Creek Glacier, Alaska. Abstract C41D-1267 presented at *2017 Fall Meeting, AGU, San Francisco, Calif.*, 11 – 15 Dec. (poster)
- Fried, M., D. Carroll, G. A. Catania, D. A. Sutherland, L. A. Stearns, **T. C. Bartholomaus**, E. Shroyer, and J. D. Nash, Detecting frontal ablation processes from direct observations of submarine terminus morphology. Abstract C23A-1208 presented at *2017 Fall Meeting, AGU, San Francisco, Calif.*, 11 – 15 Dec. (poster)
- Bartholomaus, T. C.**, Opportunities in Environmental Seismology at the Frontiers of Glaciology. *EGU Galileo conference: From process to signal – advancing environmental seismology*, Ohlstadt, Germany, 8 Jun. (keynote lecture)
- Bartholomaus, T. C.**, Iceberg calving, glacier hydrology, and their seismic observations. *POLENET/SERCE Glacial Seismology School*, Fort Collins, Colo., 13 Jun. (lecture)
- Vore, M. E. and **T. C. Bartholomaus**, Locating and Monitoring Subglacial Conduits Through Glaciohydraulic Tremor Amplitudes and Wave Polarization. *Northwest Glaciologists Meeting*, Vancouver, Canada, 14 Oct. (talk)
- Felikson, D., G. Catania, **T. C. Bartholomaus**, and M. Morlighem, Outlet glacier catchment mass loss in response to terminus retreat. *Program for Arctic Regional Climate Assessment (PARCA) Annual Meeting*, NASA Goddard, Greenbelt, Maryland, 24 Jan. (talk)
- 2016 Enderlin, E. M. , G. S. Hamilton, S. O'Neel, and **T. C. Bartholomaus**, The Continued Demise of Columbia Glacier: Insights On Dynamic Change. Abstract C12B-03 presented at *2016 Fall Meeting, AGU, San Francisco, Calif.*, 12 – 16 Dec. (talk)
- Gimbert, F., V. C. Tsai, J. M. Amundson, **T. C. Bartholomaus**, and J. I. Walter, Sub-seasonal pressure, geometry and sediment transport changes observed in subglacial channels from the analysis of seismic ground motion (Invited). Abstract C21D-02 presented at *2016 Fall Meeting, AGU, San Francisco, Calif.*, 12 – 16 Dec. (talk)
- Spagnolo, M., **T. C. Bartholomaus**, C. Clark, C. Stokes, N. Atkinson, J. A. Dowdeswell, J. Ely, A. G. C. Graham, K. Hogan, E. C. King, S. J. Livingstone, and H. D. Pritchard, The Patterned Topography of Ice Stream Beds; Insight from the Spatial Frequency of Mega-Scale Glacial Lineations. Abstract C21D-

07 presented at *2016 Fall Meeting, AGU, San Francisco, Calif., 12 – 16 Dec.*
(talk)

Felikson, D., G. A. Catania, **T. C. Bartholomaus**, B. Noel, M. R. van den Broeke, L. A. Stearns, J. D. Nash, E. Shroyer, and D. Sutherland, Glacier geometry sets inland thinning limits around Greenland. Abstract C32A-08 presented at *2016 Fall Meeting, AGU, San Francisco, Calif., 12 – 16 Dec.* (talk)

Durkin, W. J., **T. C. Bartholomaus**, M. J. Willis, and M. E. Pritchard, Dynamics of Alaska's fastest advancing tidewater glacier measured through remote sensing. Abstract C33B-0801 presented at *2016 Fall Meeting, AGU, San Francisco, Calif., 12 – 16 Dec.* (poster)

Bartholomaus, T. C., L. A. Stearns, D. Sutherland, E. Shroyer, J. D. Nash, R. T. Walker, G. A. Catania, D. Felikson, D. Carroll, M. Fried, B. Noel, and M. R. van den Broeke, Adjacent fjords and glaciers respond differently to ice sheet surface melt in West Greenland. Abstract C51A-0643 presented at *2016 Fall Meeting, AGU, San Francisco, Calif., 12 – 16 Dec.* (talk)

Fried, M., G. A. Catania, **T. C. Bartholomaus**, L. A. Stearns, D. Sutherland, E. Shroyer, J. D. Nash, and D. Carroll, Controls on Seasonal Terminus Positions at Central West Greenland Tidewater Glaciers. Abstract C51A-0651 presented at *2016 Fall Meeting, AGU, San Francisco, Calif., 12 – 16 Dec.* (poster)

Jackson, R. H., J. D. Nash, E. Shroyer, D. Sutherland, M. Fried, G. A. Catania, D. Carroll, **T. C. Bartholomaus**, and L. A. Stearns, Investigating near-glacier circulation and plume theory with high-resolution fjord surveys in West Greenland. Abstract C51A-0653 presented at *2016 Fall Meeting, AGU, San Francisco, Calif., 12 – 16 Dec.* (poster)

Bartholomaus, T. C., Signal and noise: Tracking the water that speeds glacier flow. Department of Geosciences, Boise State University, Boise, Idaho, 15 Nov. (seminar)

Gimbert, F., V. Tsai, **T. Bartholomaus**, J. Amundson, J. Walter. Sub-seasonal pressure, geometry and sediment transport changes observed in subglacial channels. *International Glaciological Society Symposium on Interactions of Glaciers and Ice Sheets with the Ocean*, La Jolla, Calif, 10-15 Jul. (talk)

Fried, M., G. Catania, L. Stearns, **T. Bartholomaus**, D. Sutherland, E. Shroyer, J. Nash. Unlocking controls on frontal ablation rates at Greenlandic tidewater glaciers. *International Glaciological Society Symposium on Interactions of Glaciers and Ice Sheets with the Ocean*, La Jolla, Calif, 10-15 Jul. (talk)

Comer, S. D., G. A. Catania, **T. C. Bartholomaus**, M. J. Fried. Thermal properties of subglacial meltwater plumes at outlet glaciers in Greenland. *International Glaciological Society Symposium on Interactions of Glaciers and Ice Sheets with the Ocean*, La Jolla, Calif, 10-15 Jul. (poster)

Bartholomaus, T. C., Seismology at the calving, sliding, and hydrologic frontiers of glaciology. *IRIS National Workshop*, Vancouver, Wash., 8 Jun. (plenary talk)

Bartholomaus, T. C., Understanding the processes behind glacier and ice sheet contributions to sea level rise through seismology. *Department of Geological Sciences, University of Oregon*, Eugene, Oregon, 9 Mar. (seminar)

Bartholomaus, T. C., Understanding the processes behind glacier and ice sheet contributions to sea level rise through seismology. *Marine Geology and*

Geophysics, Lamont-Doherty Earth Observatory, Palisades, New York, 10 Feb. (seminar)

- Bartholomaus, T. C.**, Understanding the processes behind glacier and ice sheet contributions to sea level rise through seismology. *Department of Geological Sciences, University of Texas at Austin, Austin, Texas, 28 Jan. (seminar)*
- Fried, M., G. Catania, D. Felikson, **T. C. Bartholomaus**, L. Stearns, D. Sutherland, E. Shroyer, J. Nash, Dynamic thinning during glacier retreat alters subglacial hydrology and submarine melt. *Program for Arctic Regional Climate Assessment (PARCA) Annual Meeting, NASA Goddard, Greenbelt, Maryland, 20 Jan. (poster)*
- Felikson, D., **T. C. Bartholomaus**, G. Catania, N. Korsgaard, K. Kjaer, B. Noel, M. van den Broeke, L. Stearns, D. Sutherland, E. Shroyer, J. Nash, Geometric control on the inland propagation of thinning around the Greenland Ice Sheet. *Program for Arctic Regional Climate Assessment (PARCA) Annual Meeting, NASA Goddard, Greenbelt, Maryland, 20 Jan. (talk)*
- Fried, M., G. Catania, D. Felikson, **T. C. Bartholomaus**, L. Stearns, D. Sutherland, E. Shroyer, J. Nash, Dynamic thinning during glacier retreat alters subglacial hydrology and submarine melt. *Program for Arctic Regional Climate Assessment (PARCA) Annual Meeting, NASA Goddard, Greenbelt, Maryland, 20 Jan. (poster)*
- Bartholomaus, T. C.**, From ice sheet to ocean: the processes behind glacier contributions to sea level rise. *Department of Geography, University of Idaho, Moscow, Idaho, 7 Jan. (seminar)*
- 2015 **Bartholomaus, T. C.**, G. Catania, L. A. Stearns, J. Walter, E. L. Shroyer, J. D. Nash, and D. A. Sutherland, Recurring, year-round, icequakes at a Greenland tidewater glacier. Abstract C11C-0781 presented at *2015 Fall Meeting, AGU, San Francisco, Calif., 14 - 18 Dec. (poster)*
- Bartholomaus, T. C.**, R. Walker, L. Stearns, M. Fahnestock, R. Cassotto, G. Catania, D. Felikson, M. Fried, D. Sutherland, J. Nash, E. Shroyer, High-resolution, terrestrial radar velocity observations and model results reveal a strong bed at stable, tidewater Rink Isbræ, West Greenland. Abstract presented at *2015 Fall Meeting, AGU, San Francisco, Calif., 14 - 18 Dec. (poster)*
- Byers, L. C., L. A. Stearns, N. Brunzell, G. Catania, M. Fried, **T. C. Bartholomaus**, D. Felikson, D. Sutherland, D. Carroll, E. Shroyer, J. Nash, R. Walker, D. Finnegan, A. LeWinter, Variability of subglacial discharge recorded with thermal infrared timelapse of a tidewater glacier, West Greenland, Abstract C43B-0800, presented at *2015 Fall Meeting, AGU, San Francisco, Calif., 14 - 18 Dec. (poster)*
- Carroll, D., D. Sutherland, T. Moon, B. Hudson, B. Noel, D. Felikson, G. Catania, J. Nash, E. Shroyer, **T. C. Bartholomaus**, L. Stearns, M. van den Broeke, Modeling subglacial meltwater plumes across Greenland's outlet glaciers: implications for ice-ocean coupling in a warmer climate, Abstract C13E-08 presented at *2015 Fall Meeting, AGU, San Francisco, Calif., 14 - 18 Dec. (talk)*
- Sutherland, D., D. Carroll, J. Nash, E. Shroyer, J. Mickett, L. Stearns, M. Fried, **T. C. Bartholomaus**, G. Catania, Observed spatial and temporal variability of subglacial discharge-driven plumes in Greenland's outlet glacier fjords, Abstract C13E-07 presented at *2015 Fall Meeting, AGU, San Francisco, Calif., 14 - 18 Dec. (talk)*

- Stearns, L., G. Catania, **T. C. Bartholomaus**, D. Sutherland, J. Nash, E. Shroyer, L. Byers, R. Rosenau, M. Fried, D. Felikson, R. Walker, and D. Carroll, Patterns of rapid deceleration observed at two tidewater outlet glaciers in West Greenland, Abstract C43E-07 presented at *2015 Fall Meeting, AGU*, San Francisco, Calif., 14 - 18 Dec. (talk)
- Catania, G., D. Felikson, **T. C. Bartholomaus**, M. Fried, D. Peters, D. Carroll, D. Sutherland, L. Stearns, J. Nash, and E. Shroyer, Geometric controls on outlet glaciers in central West Greenland, Abstract C12A-03 presented at *2015 Fall Meeting, AGU*, San Francisco, Calif., 14 - 18 Dec. (invited talk)
- Bartholomaus, T. C.**, G. Catania, R. Walker, L. A. Stearns, D. Felikson, M. Fahnestock, R. Cassotto, J. Nash, E. Shroyer, and D. Sutherland, (2015), High-resolution velocity observations and model results reveal a strong bed at stable, tidewater Rink Isbrae, West Greenland. *International Glaciological Society Symposium on Contemporary Ice Sheet Dynamics*, Cambridge, England, 17-21 Aug. (talk)
- Felikson, D., **T. C. Bartholomaus**, G. Catania, D. Carroll, D. Sutherland, E. Shroyer, N. Korsgaard, K. Kjaer, M. van den Broeke, L. Stearns, J. Nash, R. Walker, (2015), External forcing and geometric controls on surface elevation changes of central-west Greenland outlet glaciers. *International Glaciological Society Symposium on Contemporary Ice Sheet Dynamics*, Cambridge, England, 17-21 Aug. (talk)
- Bartholomaus, T. C.**, C. F. Larsen, M. E. West, S. O'Neel, G. Catania, (2015), Understanding the Processes Driving Glacier Change with Alaskan Seismic and GPS Data. Earthscope National Meeting, Stowe, Vt., 14-17 June. (talk)
- Bartholomaus, T. C.**, Geophysics at the ice-ocean interface: understanding ice loss at tidewater glaciers. *Geophysics Department, Stanford University*, Stanford, Calif., 16 Apr. (seminar)
- Bartholomaus, T. C.**, "Big tent" glaciology: Interdisciplinary answers for major questions in tidewater glacier dynamics. *Department of Earth and Atmospheric Science, St. Louis University*, St. Louis, Mo., 16 Mar. (seminar)
- Bartholomaus, T. C.**, G. Catania, L. A. Stearns, E. L. Shroyer, D. Sutherland, J. Nash, R. Walker, M. A. Fahnestock, L. Byers, M. Fried, (2015), Multi-disciplinary observations of iceberg calving at Rink Isbrae, West Greenland. *Program for Arctic Regional Climate Assessment (PARCA) Annual Meeting*, NASA Goddard, Greenbelt, Maryland, 27-28 Jan. (poster)
- 2014 **Bartholomaus, T. C.**, C. F. Larsen, S. O'Neel, M. E. West, J. M. Amundson, J. I. Walter, G. Catania, L. A. Stearns, R. T. Walker, D. A. Sutherland, E. L. Shroyer, and J. D. Nash, Seismic tremor reveals subglacial discharge at tidewater glaciers. Abstract C32B-05 presented at *2014 Fall Meeting, AGU*, San Francisco, Calif., 15 - 19 Dec. (talk)
- Fried, M., G. Catania, **T. C. Bartholomaus**, C. Black, D. Duncan, M. Davis, L. Stearns, J. Nash, E. L. Shroyer, D. Sutherland R. T. Walker (2014), Runoff Routing Beneath Marine-terminating Glaciers in Central West Greenland. Abstract C44B-07 presented at *2014 Fall Meeting, AGU*, San Francisco, Calif., 15-19 Dec. (talk)
- Sutherland, D. A., G. Catania, **T. C. Bartholomaus**, J. D. Nash, E. L. Shroyer, R. T. Walker, and L. A. Stearns (2014), The Ocean's Role in Outlet Glacier

- Variability: A Case Study from Uummannaq, Greenland. Abstract C34B-03 presented at *2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.* (talk)
- Bartholomaus, T. C.**, J. M. Amundson[†], J. I. Walter, S. O'Neel, M. E. West, and C. F. Larsen (2014), Subglacial discharge from tidewater glaciers. *2014 American Water Resources Association – Alaska Section, Juneau, Alaska, 22 – 24 Oct.* (talk)
- Bartholomaus, T. C.**, Seismicity, Seawater and Seasonality: Tracking ice loss from the fronts of tidewater glaciers. *Department of Earth, Atmospheric and Planetary Science, Purdue University, 2 Oct.* (seminar)
- Bartholomaus, T. C.**, Seismicity, Seawater and Seasonality: Tracking ice loss from the fronts of tidewater glaciers. *University of Texas Institute for Geophysics Seminar, Austin, Texas, 19 Sep.* (seminar)
- O'Neel, S., C.F. Larsen, M.E. West, **T.C. Bartholomaus**, T. Parker, J. Amundson, J. Walter (2014), Cold, Wet Seismology: Lessons from instrumenting temperate glaciers. *2014 Seismological Society of America Annual Meeting, Anchorage, Alaska, 30 Apr.-2 May.* (talk)
- Bartholomaus T.C.**, G. Catania, M. Fried, L. Stearns, J. Nash, E. Shroyer, D. Sutherland, R. Walker (2014), Connecting subglacial hydrology to sediment plumes and submarine melt. *Program for Arctic Regional Climate Assessment (PARCA) Annual Meeting, NASA Goddard, Greenbelt, Maryland, 28-29 Jan.* (talk)
- 2013 **Bartholomaus, T. C.**, C. F. Larsen, M. E. West, and S. O'Neel (2013), Passive seismology reveals biannual calving periodicity. Abstract C42B-01 presented at *2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.* (talk)
- Bartholomaus, T. C.**, C. F. Larsen, and S. O'Neel (2013), Does calving matter? Evidence for significant submarine melt at the terminus of Yahtse Glacier. *Understanding the response of Greenland's marine terminating glaciers to oceanic and atmospheric forcing, Beverly, Mass., 4 - 7 Jun.* (poster / talk)
- 2012 **Bartholomaus, T. C.**, C. F. Larsen, S. O'Neel, and M. E. West (2012), Tidewater terminus tug-of-war. Abstract C43D-0641 presented at *2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.* (poster)
- Heinze Fry, A. L.*, **Bartholomaus, T. C.**, and M. E. West (2012), Controls on the rate and location of crevassing icequakes at Yahtse Glacier, Alaska. Abstract C23B-0652 presented at *2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.* (poster)
- Bartholomaus, T. C.**, and C. F. Larsen (2012), Does calving matter? Evidence for significant submarine melt at the terminus of Yahtse Glacier. *International Glaciological Society Symposium on Glaciers and Ice Sheets in a Warming Climate, Fairbanks, Alaska, 24 - 29 Jun.* (talk)
- Bartholomaus, T. C.**, C. F. Larsen, M. E. West, and S. O'Neel, Alternating oceanographic and up-glacier controls on iceberg calving and near-terminus glacier velocity. *2012 UNAVCO Science Workshop, Boulder, Colo., 28 Feb. - 1 Mar.* (talk)
- 2011 **Bartholomaus, T. C.**, C. F. Larsen, S. O'Neel, and M. E. West (2011), Yahtse Glacier's warm water bath. Abstract C22A-07 presented at *2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.* (talk)
- Bartholomaus, T. C.**, M. E. West, C. F. Larsen, and S. O'Neel (2011), Characterization and sources of calving seismicity at Yahtse Glacier.

International Glaciological Society Symposium on Ice/Ocean Interactions, La Jolla, Calif., 6-10 Jun. (talk)

2010 **Bartholomaus, T. C.**, C. F. Larsen, S. O'Neel, and M. E. West (2010), Ice quake source mechanisms explored with paired imagery and seismograms. Abstract C52A-07 presented at *2010 Fall Meeting, AGU*, San Francisco, Calif., 13-17 Dec. (talk)

Larsen, C. F., **T. C. Bartholomaus**, S. O'Neel, and M. E. West (2010), Simultaneous observations of ice motion, calving and seismicity on the Yahtse Glacier, Alaska. Abstract C14A-01 presented at *2010 Fall Meeting, AGU*, San Francisco, Calif., 13-17 Dec. (talk)

West, M. E., C. F. Larsen, S. O'Neel, and **T. C. Bartholomaus** (2010), The many scales of glacier seismology. Abstract C52A-05 presented at *2010 Fall Meeting, AGU*, San Francisco, Calif., 13-17 Dec. (invited talk)

Bartholomaus, T. C., West, M., Larsen, C., and O'Neel, S. (2010), Icequake locations from geometric spreading of seismic waves. *Northwest Glaciologists' Meeting*, Fairbanks, Alaska, 8-9 Oct. (talk)

≤2009 Larsen, C. F., **T. C. Bartholomaus**, S. O'Neel, M. E. West, F. Walter, and D. Kluskiewicz (2009), Geophysical Investigation of Yahtse Glacier, Alaska USA. Abstract C12A-07 presented at *2009 Fall Meeting, AGU*, San Francisco, Calif., 14-18 Dec. 2009 (talk)

Bartholomaus, T. C., Larsen, C., West, M. and O'Neel, S. (2009), Introduction to seismicity and dynamics of Yahtse Glacier. *Northwest Glaciologists' Meeting*, Vancouver, BC, 23-24 Oct. 2009 (talk)

Anderson, R. S., **Bartholomaus, T. C.**, and Anderson, S. P. (2007), Overcharging the subglacial hydrologic network: sliding at Kennicott Glacier, Alaska, when water inputs exceed outputs. *AGU Fall Meeting 2007*. (poster)

Bartholomaus, T. C., Anderson, R. S., and Anderson, S. P. (2006), Melt season surface velocities at the Kennicott Glacier, Alaska, including response to the 2006 Hidden Creek Lake outburst flood. *AGU Fall Meeting 2006*. (poster)

Anderson, S. P., **Bartholomaus, T. C.**, and Anderson, R. S. (2006), Sliding, water pressure, water chemistry and outburst floods at Kennicott Glacier, Alaska. *AGU Fall Meeting 2006*. (poster)

Pelto, M. S., and **Bartholomaus, T. C.**[†] (2004), The disequilibrium of North Cascade Glaciers, Washington, 1984-2004. *Northwest Glaciologists' Meeting*, Seattle, Wash. 2004 (talk)

Teaching, Mentoring and Outreach

Instructor

At University of Idaho

Geomorphology, GEOL 335, 3-credit upper division undergraduate course, 23 students (Spring 2018)

Physical Geology, GEOL 101, 3-credit entry-level undergraduate course, 151 students (Fall 2017)

The Cryosphere, GEOG 404/504, 3-credit upper division undergrad / graduate student, 8 students (Spring 2017)

Directed Study: Glaciology, 2-credit graduate elective, 1 student (Fall 2016)

Prior to 2016

Glaciers 1/3 of a team-taught, 3-credit, introductory course titled *Glaciers, Volcanoes and Earthquakes*, at University of Alaska Fairbanks (2013)

Introduction to Geology- Lab (an independent course that complements a separate, lecture-based introductory class), at University of Colorado Boulder, 3 times (2005 – 2006)

Alaska Wildlands Studies Program, field course through Cal. State Univ. Monterey Bay Extension Program, 6 times (2007-2012)

Guest lecturer

Alaska Wrangell Mountains Field Studies (2017), field course through Evergreen State College, 3 days of field lectures on "Glaciology"

Glacier Seismology (2017), summer course for international graduate students organized through POLENET/SERCE at Colorado State Univ., "Glacier hydrology, iceberg calving, and their seismic observation"

The Cryosphere at UT Austin (2014), "Marine-terminating glaciers"

The Cryosphere at UT Austin (2014), "Glacier hydrology"

Glacier Physics at UAF (2013), "Tidewater glacier dynamics"

Glacier Physics at UAF (2013), "Measurement of glacier change"

Alaska Wildlands Studies Program (2013), field course through Cal. State Univ. Monterey Bay Extension Program, "Glaciology"

Principles of Ecology at UAF (2012), "How do we learn about the last million years of Earth's climate?"

Geomorphology at UAF (2010), "Introduction to hydrology"

Global Change Biology at UAF (2009), "How do we learn about the last million years of Earth's climate?"

Teaching assistant

Geomorphology at CU Boulder (2006)

Student advising

Tristan Amaral: major advisor for iceberg calving M.S. student, Geological Sciences, UI (2017 – Present)

Margot Vore: major advisor for glacier seismicity M.S. student, Geography, UI (2016 – Present)

Mason Fried: mentor to glacier hydrology and ice/ocean interactions Ph.D. student of Prof. Ginny Catania, UT Austin (2014 – Present)

Denis Felikson: mentor to satellite remote sensing and ice/ocean interactions Ph.D. student of Prof. Ginny Catania, UT Austin (2014 – Present)

Ayla Heinze Fry: summer research advisor to IRIS (Incorporated Research Institutions for Seismology) undergraduate research intern, UAF (2012)

Student Advisory Committee Membership

Jeff Larimer: fluvial geomorphology Ph.D. student, Geological Sciences, UI (2017 – Present)

Outreach presentations

Bartholomaus, T. C., (2015). Tracking water flow through glaciers and its impact of ice flow. *Lecture at Liberal Arts and Science Academy, public high school in Austin, Texas*. 20 October 2015.

Bartholomaus, T. C., (2010). How do we use ice cores to learn about the Earth's past climate? *Monthly public lecture series at the Heights Casino, Brooklyn, New York*. 7 January 2010.

Bartholomaus, T. C., Anderson, R. S., and Anderson, S. P., (2008). Backing up a glacier's plumbing: What happens when Hidden Creek Lake drains and how water makes the Kennicott Glacier slide. *Wrangell Mountains Center/Wrangell-St. Elias National Park Arts and Lectures Series, Kennecott, Alaska*. 13 July 2008.

Leadership and Service Activities External to University of Idaho

Frontiers in Earth Science - Cryospheric Sciences
Associate Editor, 2015 – Present

Cryosphere Focus Group of the American Geophysical Union
Representative to the Fall Meeting Program Committee, 2014 – Present
Executive Committee Member, 2015 – Present

Member of Strategic Planning Committee for the University of Texas Institute for Geophysics, responsible for Arctic Research Priorities, 2015

Proposal reviewer for *National Science Foundation – Arctic Natural Sciences, National Science Foundation – Antarctic Integrated System Science, National Science Foundation – Antarctic Glaciology*

Referee for *Annals of Glaciology, Arctic, Antarctic, and Alpine Research, Earth and Planetary Science Letters, Geophysical Research Letters, Geoscientific Model Development, Hydrological Processes, International Association of Geodesy Symposia Proceedings, Journal of Geophysical Research – Earth Surface, Journal of Glaciology, Nature Communications, Science Advances, and The Cryosphere*

Co-convener of sessions at AGU Fall Meetings:

2017: *Visualizing the dynamic cryosphere*

2014: *Glacier-Ocean Interactions: Iceberg Calving and Submarine Melting*

2013: *Seismicity in the cryosphere*

2013: *Ice-Ocean-Seabed interactions in fjords*

2011: *Measurement and interpretation of glacier velocities*

US CLIVAR Greenland Ice Sheet-Ocean Interactions Working Group
Contributor to workshop report, 2013

Graduate Academic and Advisory Committee of the Faculty Senate, University of Alaska Fairbanks

Member (graduate student representative), 2011 – 2013

Geophysical Institute Graduate Student Association, University of Alaska Fairbanks
Co-founder and president, 2010 – 2011, Member, 2010 – 2013

Ad-hoc student working group on the Geophysics curriculum, University of Alaska
Fairbanks
Leader, 2011, 2013

Wrangell Mountains Center (an art-, science-, and education-focused non-profit
organization), McCarthy, Alaska,
President of Board of Directors, 2016 – Present
Director, 2014 – Present

Service to the University of Idaho

College of Science Student Awards Committee
Member, 2017

University of Idaho External Program Review and Accreditation Committee
Member, 2017 - 2018

Field Activities

Year	Duration	Project focus	Location	Role
2017	4 days	Glacier seismicity	Alaska	Prin. Investigator
2017	1 week	Glacier seismicity	Alaska	Prin. Investigator
2016	3 days	Glacier seismicity	Alaska	Prin. Investigator
2016	1 week	Glacier seismicity	Alaska	Prin. Investigator
2015	4 weeks	Tidewater glacier dynamics	Greenland	Seismologist & Asst.
2014	3 weeks	Tidewater glacier dynamics	Greenland	Seismologist & Asst.
2013	3 weeks	Tidewater glacier dynamics	Greenland	Seismologist & Asst.
2013	1 week	Laser altimetry	Alaska	Assistant
2012	3 days	Tidewater glacier dynamics	Alaska	Assistant
2012	4 days	Physical oceanography	Alaska	Assistant
2011	2 weeks	Glacier dynamics and seismology	Alaska	Field lead
2011	1 week	Physical oceanography	Alaska	Prin. Investigator
2011	2 weeks	Glacier dynamics and seismology	Alaska	Assistant
2011	4 days	Glacier mass balance	Alaska	Assistant
2010	2 weeks	Glacier dynamics and seismology	Alaska	Assistant
2010	1 week	Physical oceanography	Alaska	Prin. Investigator
2010	3 weeks	Glacier dynamics and seismology	Alaska	Assistant
2010	2 weeks	Glacier dynamics and seismology	Alaska	Assistant
2009	2 weeks	Glacier dynamics and seismology	Alaska	Assistant
2008-09	3 months	Ice core logging	Antarctica	Assistant
2007-08	1 month	Hydrology / geomorphology	California	Consultant
2006	2 months	Glacier hydrology and dynamics	Alaska	Field lead

2006	2 weeks	Glacier hydrology and dynamics	Alaska	Assistant
2004	2 weeks	Glacier mass balance	Washington	Assistant
2002-04	5 months	Engineering geology	Washington	Consultant

Professional Affiliations

- International Glaciological Society since 2009.
- American Geophysical Union since 2006.

Updated January 2018