GINNY CATANIA

University of Texas at Austin, Jackson School of Geosciences
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EDUCATION

Ph.D. Geophysics	University of Washington, Seattle WA	1999-2004
M.Sc. Geology	University of Minnesota, Minneapolis MN	1995-1998
B.Sc. Geography	University of Western Ontario, London ON	1990-1994

PROFESSIONAL POSITIONS HELD

Full Professor, Dept. of Geological Sciences, University of Texas	2019 - present
Senior Scientist, Institute for Geophysics, University of Texas	2019 - present
Associate Professor, Dept. of Geological Sciences, University of Texas	2013-2019
Research Scientist, Institute for Geophysics, University of Texas	2013-2019
Assistant Professor, Dept. of Geological Sciences, University of Texas	2009-2013
Research Associate, Institute for Geophysics, University of Texas	2005-2013
Postdoctoral Scholar, Earth Sciences, Univ. of California (Santa Cruz)	2004-2005

FELLOWSHIPS AND AWARDS

UT Libraries Map & Geospatial Collections Explorer Fellowship, UT-Austin	2021
Course Development Award (Ethics Flag), UT-Austin	2021
JSG Inaugural Diversity, Equity, and Inclusion Award	2021
UT Executive Education Leadership Training Fellowship	2019
Op-Ed Public Voices Fellowship	2017
JSG Service award to the DGS Faculty Women	2017
Meierjurgen Fellowship for Visiting Scientists, University of Oregon	2017
JSG Research Excellence Fellowship	2007
University of Washington Johnston Research Fellowship	2002
Outstanding Teaching Award, University of Minnesota	1997
Gibson Hydrogeology Endowment, University of Minnesota	1996

PUBLISHED JOURNAL ARTICLES

Researcher ID: B-9787-2008
Google Scholar Profile
○ indicates UT post-doc advisee
* indicates UT graduate student advisee
† indicates UT undergrad advisee

66. S. Goliber*, T. Black*, **G. Catania**, J. Lea, H. Olsen†, D. Cheng, S. Bevan, A. Bjørk, C. Bunce, S. Brough, J.R. Carr, T. Cowton, A. Gardner, D. Fahrner, E. Hill, I. Joughin, N. Korsgaard, A. Luckman, T. Moon, A. Sole, M. Wood, E. Zhang, 2022, TermPicks: A century of Greenland glacier terminus data for use in machine learning applications, *The Cryosphere*.

65. J. Christian○, A. Robel, **G. Catania**, 2022, A probabilistic framework for quantifying the role of anthropogenic climate change in marine-terminating glacier retreats, *The Cryosphere*, 16, 2725–2743, doi:10.5194/tc-16-2725-2022

64. **G. Catania**, T. Moon, and A. Aschwanden (2022), Glacial knowledge gaps impede resilience to sea level rise, Eos, 103, doi:10.1029/2022EO220238. ***Peer-reviewed Opinion Piece**

63. A. Robel, S.S. Pegler, **G. Catania**, D. Felikson, L.M. Simkins, 2022, Ambiguous stability of glaciers at bed peaks, *Journal of Glaciology*, 1-8, doi.org/10.1017/jog.2022.31

62. D. Felikson*, **G. Catania**, T. Bartholomaus°, M. Morlighem, 2020, Steep glacier knickpoints mitigate inland thinning in Greenland, *Geophysical Research Letters*, doi:10.1029/2020GL090112.

61. **G. Catania**, L. A. Stearns, T. Moon, E. Enderlin, R. Jackson, 2020, AGU Centennial Grand Challenge: Future evolution of Greenland's outlet glaciers, *Journal of Geophysical Research - Earth Surface*, doi:10.1029/2018JF004873. ***Commissioned Manuscript**

60. M. Fried*, D. Carroll, **G. Catania**, D. Sutherland, L. Stearns, E. Shroyer, J. Nash, 2019, Distinct frontal ablation processes drive heterogeneous submarine terminus morphology, *Geophysical Research Letters*, doi:10.1029/2019GL083980.

59. F. Straneo, D. Sutherland, L. Stearns, **G. Catania**, P. Heimbach, T. Moon, M. Cape, K. Laidre, D. Barber, S. Rysgaard, R. Mottram, S. Olsen, M. Hopwood, L. Meire, 2019, The case for a sustained Greenland Ice sheet-Ocean Observing System, *Frontiers in Marine Science: Ocean Observation*, doi:10.3389/fmars.2019.00138.

58. D. Carroll, D. Sutherland, B. Curry, J. Nash, E. Shroyer, **G. Catania**, L. Stearns, J. Grist, C. Lee, L. de Steur, 2018, Subannual and seasonal variability of Atlantic-origin waters in two adjacent west Greenland fjords, *Journal of Geophysical Research - Oceans*, doi:10.1029/2018JC014278.

57. M. Fried*, **G. Catania**, L. Stearns, D. Sutherland, T. Bartholomaus°, E. Shroyer, J. Nash, 2018, Reconciling drivers of seasonal terminus advance and retreat at thirteen central west Greenland tidewater glaciers, *Journal of Geophysical Research - Earth Surface*, doi:10.1029/2018JF004628.

56. **G. Catania**, L. Stearns, D. Sutherland, M. Fried*, T. Bartholomaus°, M. Morlighem, E. Shroyer, J. Nash, 2018, Geometric controls on tidewater glacier retreat in Central Western Greenland, *Journal of Geophysical Research - Earth Surface*, doi:10.1029/2017JF004499.

55. L. Andrews*, M. Hoffman, T. Neumann, **G. Catania**, M. Lüthi, R. Hawley, K. Schild, C. Ryser, B. Morriss, 2018, Seasonal evolution of the subglacial hydrologic system modified by supraglacial lake drainage in western Greenland, *J. Geophys. Res. - Earth Surface*, doi:10.1029/2017JF004585.

54. M. Hoffman, M. Perego, L. Andrews, S. Price, T. Neumann, J. Johnson, **G. Catania**, M. Lüthi, 2018, Widespread moulin formation during supraglacial lake drainages in Greenland, *Geophysical Research Letters*, *45*, 778-788, doi:10.1002/2017GL075659.

53. M. Morlighem, C.N. Williams, E. Rignot, L. An, J.L. Bamber, **G. Catania**, N. Chauche, J.A. Dowdeswell, B. Dorschel, I. Fenty, K. Hogan, I. Howat, A. Hubbard, M. Jakobsson, T.M. Jordan, K.K. Kjeldsen, R. Millan, L. Mayer, J. Mouginot, B.P.Y. Noel, C. O'Cofaigh, S. Palmer, S. Rysgaard, H. Seroussi, M.J. Siegert, P. Slabon, F. Straneo, M.R. van den Broeke, W. Weinrebe, M. Wood, and K. B. Zinglersen, 2017, Bed Machine v3: Complete bed topography and ocean bathymetry mapping of Greenland from multi-beam echo sounding combined with mass conservation, *Geophysical Research Letters*, *44*, 11,051-11,061, doi:10.1002/2017GL074954.

52. D. Carroll, D. Sutherland, E. Shroyer, J. Nash, **G. Catania**, L. Stearns, 2017, Subglacial discharge-driven renewal of tidewater glacier fjords, *Journal of Geophysical Research - Oceans*, *122*, 6611-6629, doi:10.1002/2017JC012962.

51. R. Jackson, E. Shroyer, J. Nash, D. Sutherland, D. Carroll, M. Fried*, **G. Catania**, T. Bartholomaus°, L. Stearns, 2017, Near-glacier surveying of a subglacial discharge plume: Implications for plume parameterizations *Geophysical Research Letters*, *44*, 6886-6894, doi:10.1002/2017GL073602.

50. D. Felikson*, T. Bartholomaus°, **G. Catania**, N. Korsgaard, K. Kjaer, M. Morlighem, B. Noel, M. van den Broeke, L. Stearns, J. Nash, E. Shroyer, D. Sutherland, J. Nash, 2017, Inland thinning on the Greenland ice sheet controlled by outlet glacier geometry, *Nature Geoscience*, *10*, 366-369, doi:10.1038/ngeo2934.

49. L. Logan*, L. Lavier, E. Choi, E. Tan and **G. Catania**, 2017, Semi-brittle rheology and ice dynamics in DynEarthSol3D, *The Cryosphere*, *11*, 117-132, doi:10.5194/tc-11-117-2017.

48. M. Hoffman, L. Andrews*, S. Price, **G. Catania**, T. Neumann, M. Lüthi, J. Gulley, C. Ryser, R. Hawley, B. Morriss, 2016, Greenland subglacial drainage evolution regulated by weakly-connected regions of the bed, *Nature Communications*, *7*(13903), 10.1038/NCOMMS13903.

47. C. Hulbe, M. Klinger, M. Masterson, **G. Catania**, K. Cruikshank, A. Bugni, 2016, Tidal bending and strand cracks at the Kamb Ice Stream grounding line, West Antarctica, *Journal of Glaciology*, *62*(235), 816-824, doi:10.1017/jog.2016.74.

46. D. Carroll, D. Sutherland, B. Hudson, T. Moon, **G. Catania**, E. Shroyer, J. Nash, T. Bartholomaus°, D. Felikson*, L. Stearns, B. Noel, M. van den Broeke, 2016, The impact of glacier geometry on meltwater plume structure and submarine melt in Greenland fjords *Geophysical Research Letters*, *43*, 9739-9748, doi:10.1002/2016GL070170.

45. J. MacGregor, M. Fahnestock, **G. Catania**, A. Aschwanden, G. Clow, W. Colgan, S. Gogineni, M. Morlighem, S. Nowicki, J. Paden, S. Price, H. Seroussi, 2016, A synthesis of the basal thermal state of the Greenland Ice Sheet, *Journal of Geophysical Research*, *121*, 1328-1350, doi:10.1002/2015JF003803, ***Editor's Highlight**.

44. T. Bartholomaus°, L. Stearns, D. Sutherland, E. Shroyer, J. Nash, R. Walker, **G. Catania**, D. Felikson*, D. Carroll, M. Fried*, B. Noel, M. van den Broeke, 2016, Contrasts in the response of adjacent fjords and glaciers to ice sheet surface melt in western Greenland, *Annals of Glaciology*, *57*(73), 25-38, .

43. E. Rignot, I. Fenty, Y. Xu, C. Cai, I. Velicogna, C. O'Cofaigh, W. Weinrebe, **G. Catania**, D. Duncan, 2016, Bathymetry data reveal glaciers vulnerable to ice-ocean interaction in Uummannaq and Vaggat glacial fjords, west Greenland, *Geophys. Res. Lett.*, *43*, 2667-2674, doi:10.1002/2016GL067832.

42. J. MacGregor, W. Colgan, M. Fahnestock, M. Morlighem, **G. Catania**, J. Paden, S. Gogineni, 2016, Holocene deceleration of the Greenland Ice Sheet, *Science*, *351*(590), 590-593, doi:10.1126/science.aab1702.

41. O. Marsh, H. Fricker, M. Siegfried, K. Christianson, K. Nicholls, H. Corr and **G. Catania**, 2016, High basal melting forming a channel at the grounding line of Ross Ice Shelf, Antarctica, *Geophysical Research Letters*, *43*, doi:10.1002/2015GL066612.

40. M. Fried*, **G. Catania**, T. Bartholomaus°, D. Duncan, M. Davis, L. Stearns, J. Nash, E. Shroyer, D. Sutherland, R. Walker, 2015, Distributed subglacial discharge drives significant submarine melt at a Greenland tidewater glacier, *Geophysical Research Letters*, *42*, 9328-9336, doi:10.1002/2015GL065806.

39. D. Carroll, D. Sutherland, E. Shroyer, J. Nash, **G. Catania**, L. Stearns, 2015, Modeling turbulent subglacial meltwater plumes: Implications for fjord-scale buoyancy-driven circulation, *Journal of Physical Oceanography*, *45*, 2169-2185, doi:10.1175/JPO-D-15-0033.1.

38. J. MacGregor, J. Li, J. Paden, **G. Catania**, G. Clow, M. Fahnestock, S. Gogenini, R. Grimm, M. Morlighem, S. Nandi, H. Seroussi, D. Stillman, 2015, Radar attenuation and temperature within the Greenland Ice Sheet, *Journal of Geophysical Research*, *120*, 983-1008, doi:10.1002/2014JF003418.

37. M. Lüthi, C. Ryser, L.C. Andrews*, **G. Catania**, M. Funk, R.L. Hawley, M.J. Hoffman, T.A. Neumann, 2015, Heat sources within the Greenland Ice Sheet: dissipation, temperate paleo-firn and cryo-hydrologic warming, *The Cryosphere*, *9*(1), 245-253, doi:10.5194/tc-9-245-2015.

36. J. MacGregor, M. Fahnestock, **G. Catania**, J. Paden, S. Gogenini, S. Young, S. Rybarski, A. Mabrey, B. Wagman, M. Morlighem, 2015, Radiostratigraphy and age structure of the Greenland Ice Sheet, *Journal of Geophysical Research*, *120*, 212-241, doi:10.1002/2014JF003215.

35. C. Ryser, M.P. Lüthi, L.C. Andrews*, **G. Catania**, M. Funk, R. Hawley, M. Hoffman, T. Neumann, 2014, Caterpillar-like ice motion in the ablation zone of the Greenland Ice Sheet, *Journal of Geophysical Research*, *119*, 2258-2271, .

34. L. Andrews*, **G. Catania**, M. Hoffman, J. Gulley, M. Lüthi, C. Ryser, R. Hawley and T. Neumann, 2014, Direct observations of evolving subglacial drainage beneath the Greenland Ice Sheet, *Nature*, *514*, 80-83, doi:10.1038/nature13796.

33. C. Ryser, M.P. Lüthi, L.C. Andrews*, **G. Catania**, R. Hawley, T. Neumann, 2014, Sustained high basal motion of the Greenland Ice Sheet revealed by borehole deformation, *Journal of Glaciology*, *60*(222), 647-660, doi:10.3189/2014JoG13J196.

32. C. Röösli, F. Walter, S. Husen, L. Andrews*, M. Lüthi, **G. Catania**, E. Kissling, 2014, Sustained seismic tremors and icequakes detected in the ablation zone of the Greenland Ice Sheet, *Journal of Glaciology*, *60*(221), 563-583, doi:10.3189/2014JoG13J210.

31. T.J. Fudge, H. Conway, **G. Catania**, D. Blankenship, K. Christianson, I. Joughin, B. Smith, S. Kempf, D. Young and S. Anandakrishnan, 2014, Identifying flowlines and limitations of flux analyses in the interior of Thwaites Glacier, Antarctica, *Annals of Glaciology*, *55*(67), 107-114, doi:10.3189/2014AoG67A033.

30. B.F. Morriss, R.L. Hawley, J.W. Chipman, L.C. Andrews*, **G. Catania**, M.J. Hoffman, M.P. Lüthi, T.A. Neumann, 2013, A ten-year record of supraglacial lake evolution and rapid drainage in West Greenland using an automated processing algorithm for multispectral imagery, *The Cryosphere*, *7*, 1869-1877, doi:10.5194/tc-7-1869-2013.

29. J.A. MacGregor°, **G. Catania**, H. Conway, D. Schroeder, I. Joughin, D. Young, S. Kempf, D. Blankenship, 2013, Weak bed control of the eastern shear margin of Thwaites Glacier, West Antarctica, *Journal of Glaciology*, *59*(217), 900-912, doi:10.3189/2013JoG13J050.

28. J.D. Gulley°, P. Spellman, J. Martin, M. Covington, D. Benn and **G. Catania**, 2013, Large values of hydraulic roughness in subglacial conduits during conduit enlargement: implications for modeling conduit evolution, *Earth Surface Processes and Landforms*, *39*, 296-310, doi:10.1002/esp.3447.

27. L. Logan*, **G. Catania**, E. Choi, L. Lavier, 2013, A novel method for predicting fracture in floating ice, *Journal of Glaciology*, *59*(216), 750-758, doi:10.3189/2013JoG12J210.

26. B. Wagman*, **G. Catania**, 2013, Impact of subglacial hydrology on force balance for a physically-modeled ice stream, *Annals of Glaciology*, *54*(63), 333-342, doi:10.3189/2013AoG63A345.

25. F. Straneo, P. Heimbach, O. Sergienko, G. Hamilton, **G. Catania** and 12 others, 2013, Challenges to understand the dynamic response of Greenland's marine-terminating glaciers to oceanic and atmospheric forcing, *Bulletin of the American Meteorological Society*, 1131-1144, doi:10.1175/BAMS-D-12-00100.1.

24. P.T. Fretwell and 54 others, 2013, BEDMAP2: Improved ice bed, surface and thickness datasets for Antarctica, *The Cryosphere*, *7*, 375-393, doi:10.5194/tc-7-375-2013.

23. J.D. Gulley°, M. Grabiec, J.B. Martin, J. Jania, **G. Catania**, P. Glowacki, 2012, The effect of discrete recharge by moulins and heterogeneity in flow-path efficiency at glacier beds on subglacial hydrology, *Journal of Glaciology*, *58*(211), 926-940, doi:10.3189/2012JoG11J189.

22. J.D. Gulley°, P. Walthard, J. Martin, A. Banwell, D. Benn, **G. Catania**, 2012, Conduit roughness and dye-trace breakthrough curves: why slow velocity and high dispersivity may not reflect flow in distributed systems, *Journal of Glaciology*, *58*(211), 915-925, doi:10.3189/2012JoG11J115.

21. **G. Catania**, C. Hulbe, H. Conway, T.A. Scambos, C.F. Raymond, 2012, Variability in the mass flux of the Ross Sea ice streams, Antarctica, over the last millennium, *Journal of Glaciology*, *58*(210), 741-752, doi:10.3189/2012JoG11J219.

20. J.A. MacGregor°, **G. Catania**, M.S. Markowski† and A.G. Andrews†, 2012, Widespread rifting and retreat of ice-shelf margins in the eastern Amundsen Sea Embayment between 1972 and 2011, *Journal of Glaciology*, *58*(209), 458-466, doi:10.3189/2012JoG11J262, ***Editor's Highlight**.

19. M.J. Hoffman, **G. Catania**, T.A. Neumann, L. Andrews*, J.A. Rumrill, 2011, Links between acceleration, melting, and supraglacial lake drainage of the Western Greenland Ice Sheet, *Journal of Geophysical Research*, *116*(F04035), doi:10.1029/2010JF001934.

18. R.W. Obbard, K.E. Sieg, I. Baker, D. Meese and **G.A. Catania**, 2011, Microstructural evolution in the fine-grained region of the Siple Dome ice core, *Journal of Glaciology*, *57*(206), 1046-1056, doi:10.3189/002214311798843322.

17. J.A. MacGregor°, S. Anandakrishnan, **G. Catania**, D.P. Winebrenner, 2011, The grounding zone of the Ross Ice Shelf, West Antarctica, from ice-penetrating radar, *Journal of Glaciology*, *57*(205), 917-928, doi:10.3189/002214311798043780.

16. **G. Catania**, C. Hulbe and H. Conway, 2010, Grounding line basal melt rates from radar-derived internal stratigraphy, *Journal of Glaciology*, *56*(197), 545-554, doi:10.3189/002214310792447842.

15. **G. Catania**, T. Neumann, 2010, Persistent englacial drainage features in the Greenland Ice Sheet, *Geophysical Research Letters*, *37*(L02501), doi:10.1029/2009GL041108.

14. K. Matsuoka, A. Gades, H. Conway and **G. Catania**, 2009, Radar signatures beneath a surface topographic lineation near the outlet of Kamb Ice Stream and Engelhart Ridge, West Antarctica, *Annals of Glaciology*, *50*(51), 98-104, doi:10.3189/172756409789097595.

13. T. Neumann, H. Conway, S. Price, E. Waddington, **G. Catania** and D. Morse, 2008, Holocene accumulation and ice sheet dynamics in central West Antarctica, *Journal of Geophysical Research*, *113*(F02018), doi:10.1029/2007JF000764.

12. **G. Catania**, T. Neumann and S. Price, 2008, Characterizing englacial drainage in the ablation zone of the Greenland Ice Sheet, *Journal of Glaciology*, *54*(187), 567-578, doi:10.3189/002214308786570854, ***Editor's Highlight**.

11. S. Price, A. Payne, **G. Catania**, T. Neumann, 2008, Seasonal Acceleration of inland ice via along-flow coupling to marginal ice, *Journal of Glaciology*, *54*(185), 213-219, doi:10.3189/002214308784886117, ***Editor's Highlight**.

10. S. Anandakrishnan, **G. Catania**, R. Alley and H. Horgan, 2007, Discovery of till deposition at the grounding line of Whillans Ice Stream, *Science*, *315*(5820), 1835-1838, doi:10.1126/science.1138393.

9. **G. Catania**, T. Scambos, H. Conway and C. Raymond, 2006, The sequential stagnation of Kamb Ice Stream, Weat Antarctica, *Geophysical Research Letters*, *22*(L14502), doi:10.1029/2006GL026430.

8. **G. Catania**, H. Conway, C. Raymond and T. Scambos, 2006, Evidence for floatation or near-floatation in the mouth of Kamb Ice Stream, West Antarctica, *Journal of Geophysical Research: Earth Surface*, *111*(F01005), doi:10.1029/2005JF000355.

7. C. Raymond, **G. Catania**, N. Nereson and C.J. Van der Veen, 2006, Bed radar reflectivity across the north margin of Whillans Ice Stream and implications for margin processes, *Journal of Glaciology*, *52*(176), 3-10, doi:10.3189/172756506781828890.

6. I. Joughin, R. Bindschadler, M. King, D. Voight, R. Alley, S. Anandakrishnan, H. Horgan, L. Peters, P. Winberry, S. Das and **G. Catania**, 2005, Continued deceleration of Whillans Ice Stream, West Antarctica, *Geophysical Research Letters*, *32*(L22501), doi:10.1029/2005GL024319.

5. **G. Catania**, H. Conway, C. Raymond and T. Scambos, 2005, Surface morphology and internal layer stratigraphy in the downstream end of Kamb Ice Stream, West Antarctica, *Journal of Glaciology*, *51*(174), 423-431, doi:10.3189/172756505781829142.

4. **G. Catania**, H. Conway, A. Gades, C. Raymond and H. Engelhardt, 2003, Bed reflectivity beneath inactive ice streams in West Antarctica, *Annals of Glaciology*, *36*, 287-291, doi:10.3189/172756403781816310.

3. D. Winebrenner, B. Smith, **G. Catania**, H. Conway and C. Raymond, 2003, Radio-frequency attenuation beneath Siple Dome, West Antarctica, from wide-angle and profiling radar observations, *Annals of Glaciology*, *37*, 226-232, doi:10.3189/172756403781815483.

2. H. Conway, **G. Catania**, C. Raymond, A. Gades, T. Scambos, H. Engelhardt, 2002, Switch of flow direction of an Antarctic ice stream, *Nature*, *419*, 465-467, doi:10.1038/nature01081.

1. **G. Catania** and C. Paola, 2001, Braiding under glass, *Geology*, *29*(3), 259-262, https://tinyurl.com/y779gjoh, *__Cover Story__.

CURRENT FUNDING

NSF, OPP-ANS **2022-2025**
Machine-enabled modeling of terminus ablation for Greenland's outlet glaciers
PI: G. Catania; co-PIs: D. Trugman (UT), L. Stearns (KU), D. Felikson, (UM)
Total award: $856k; UT portion: $504k

Keck Foundation **2022-2025**
Submersibles in the icy deep - Exploring sediment-ice sheet interactions
PI: G. Catania; Co-PIs: S. Gulick (UT), J. Goff (UT), J. Jaeger (Univ. Florida), T. Bartholomas (U. Idaho), M. Jakuba (WHOI)
Total award: $1.5M

NASA, ICESat-2 **2021-2022**
Time-dependent land masks for improved elevation change over ice sheets
PI: G. Catania
Total award: $110k

NASA, ICESat-2 **2021-2024**
Revealing the processes controlling outlet glacier seasonality with ICESat-2
PI: D. Felikson (NASA); Co-PIs: G. Catania, B. Csatho (U. Buffalo)
Total award: $525k; UT portion: $260k

NSF, GOLD-EN **2021-2023**
Bringing a diversity program to scale at the Jackson School of Geosciences
PI: G. Catania; co-PIs: L. Turner and D. Thomas (UT)
Total award: $300k

NASA, Cryosphere **2018-2021**
ICESat-2-enabled understanding of Greenland tidewater glacier dynamics
PI: G. Catania; co-PI: Tim Bartholomaus (U. Idaho)
Total award: $648k; UT portion: $396k

NASA, Earth and Space Science Graduate Fellowship **2018-2021**
SpATIaL: Semi-Automatic glacier Terminus Inventory from Landsat
PhD Student: Sophie Goliber
Total award: $45k per year, renewable for 3 years

PAST FUNDING

NSF, EarthCube RCN **2017-2019**
Engaging the Greenland Ice Sheet Ice Sheet Ocean (GRISO) Science Network
PI: Fiamma Straneo (Scripps); co-PIs: Patrick Heimbach (UT), Twila Moon (NSIDC), David Sutherland (U. Oregon)

Total award: $299k; UT portion: $20k

NASA, Cryosphere (IceBridge) **2015-2017**
Accumulation and flow of the Greenland Ice Sheet during the late Holocene
PI: Joe MacGregor; co-PIs: Mark Fahnestock (UAF), John Paden (U. Kansas)
Total award: $354k

NASA, Interdisciplinary Research in Earth Science **2013-2018**
Physical controls on ocean-terminating glacier variability in Central West Greenland
PI: G. Catania; co-PIs: Leigh Stearns (U. Kansas), David Sutherland (U. Oregon), Emily Shroyer (Oregon State), Jonathan Nash (Oregon State), Ryan Walker (NASA)
Total award: $1.5M; UT portion: $335k; additional logistics: $402k

NASA, IceBridge **2012-2015**
A synthetic approach to mapping the thermal state of the Greenland Ice Sheet using radio-stratigraphy and satellite remote sensing
PI: G. Catania; co-PIs: Joe MacGregor (UT), Mark Fahnestock (UAF)
Total award: $460k; UT portion: $313k

NSF, Arctic Natural Sciences **2011-2014**
A new radio-stratigraphy of the Greenland Ice Sheet and critical boundary conditions for the next generation of ice sheet models
PI: G. Catania; co-PIs: Joe MacGregor (UT), Mark Fahnestock (UAF)
Total award: $419k; UT portion: $306k

NSF, Cyber-Enabled Discovery and Innovation **2010-2013**
Dynamics of Ice Sheets: Advanced Simulation Models, Large-Scale Data Inversion, and Quantification of Uncertainty in Sea Level Rise Projection
PI: Omar Ghattas (UT); co-PIs: Don Blankenship, Marc Hesse, Thomas Hughes, Charles Jackson, Luc Lavier (all UT)
Total award: $2M

NASA, ICESat-II **2010-2013**
Linking ICESat Observations to CryoSat-2 and Future Missions: Elevation change detection, waveform analysis, and cross-calibration
PI: Robert Schutz (UT-CSR); co-PIs: Tim Urban (UT-CSR), Charles Webb (UT-CSR)
Total award: $852k

NSF, Arctic Natural Sciences **2009-2013**
Subglacial controls on Greenland Ice Sheet marginal acceleration
PI: G. Catania; co-PIs: Martin Lüthi, Martin Funk (ETH), Bob Hawley (Dartmouth), Tom Neumann (NASA)
Total award: $1.3M; UT portion: $345k; additional logistics: $510k

NSF, Antarctic Glaciology **2008-2013**
Ice-flow history of the Thwaites Glacier, West Antarctica
PI: G. Catania; co-PI: Howard Conway (UW)
Total award: $641k; UT portion: $416k

National Geographic Society **2012**
Greenland subglacial water pressure and its impact on ice flow
PI: G. Catania; co-PI: Jason Gulley (UT)
Total award: $25k

NSF, Antarctic Glaciology **2006-2009**

Grounding-line forensics: The history of grounding line retreat in the Kamb Ice Stream outlet region
PI: G. Catania; co-PI: Christina Hulbe (Portland State)
Total award: $378k; UT portion: $237k; additional logistics: not incl.

NASA, Cryosphere **2006-2009**
The importance of meltwater to the peripheral thinning of Greenland
PI: Tom Neumann (NASA) (co-authored by G. Catania while in graduate school)
Total award: $637k; UT portion $133k; additional logistics: $73k

INVITED SEMINAR PRESENTATIONS

Dartmouth	2022
Interagency Arctic Research Policy Committee	2022
Rice University; University of Wisconsin; Tulane University	2021
International Glaciological Society Global Seminar	2020
Dartmouth (declined because of COVID-19)	2020
Keynote at IASC Workshop on the Dynamics and Mass Budget of Arctic Glaciers, Austria	2020
MIT; Stanford University; CU-Boulder	2019
CU-Boulder; Univ. of Washington	2018
Oregon State Univ.; Univ. of Washington; Univ. of Oregon; CalTech	2017
Establishing a Greenland Ice Sheet Ocean Observing System (GriOOS) Workshop	2015
Scripps Institute of Oceanography; Woods Hole-MIT Joint Program	2013
Univ. of Oregon	2012
Stanford Univ.	2011
UT-Dallas; UT-Austin Center for Space Research; UT-San Antonio	2010
Columbia Univ. (LDEO); City Univ. of New York; Univ. of Illinois:Champaign-Urbana	2009
California Institute of Technology; Univ. of Michigan	2009
UT-Austin Center for Space Research; Duke Univ.	2007
UT-Austin Institute for Geophysics	2005

INVITED CONFERENCE PRESENTATIONS

∘ indicates UT post-doc advisee
* indicates UT graduate student advisee
† indicates UT undergrad advisee

S. Goliber*, T. Black*, **G. Catania**, J. Lea, D. Cheng, TermPicks Team, Lessons learned from TermPicks: A century of Greenland glacier terminus data (invited), Abstract C51A-05, Fall 2021 AGU Meeting, New Orleans.

G. Catania, S. Goliber*, L. Castaneda†, Bed topographic control on outlet glacier retreat and stability in Greenland (invited), Abstract C009-08, Fall 2020 AGU Meeting Online.

G. Catania, D. Felikson, T. Bartholomaus, M. Morlighem, L. Stearns, Topographic controls on marine-terminating glacier dynamic response in Greenland (invited), Abstract C12B-01 presented at the 2018 Fall AGU Meeting, Washington DC, 10-14 Dec. 2018.

D. Felikson*, **G. Catania**, T. Bartholomaus∘, M. Morlighem, Knickpoints control glacier thinning in Greenland (invited), PARCA Annual Meeting (NASA Goddard), Greenbelt MD, 21-23 Jan. 2018.

L.A. Stearns, S. Shankar, C. van der Veen, S. Rezvanbehbahani, D. Sutherland, **G. Catania**, F. Straneo, Linking calving behavior and iceberg distributions in Greenland fjords (invited), Abstract C12A-03 presented at the 2017 Fall AGU Meeting, New Orleans, 11-17 Dec. 2017.

D. Felikson*, T. 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 (invited), PARCA Annual Meeting (NASA Goddard), Greenbelt MD, 20-22 Jan. 2016.

G. Catania., D. Felikson*, T. Bartholomaus°, M. Fried*, D. Peters†, D. Carroll, D. Sutherland, L. Stearns, J. Nash, E. Shroyer, Geometric controls on outlet glaciers in central West Greenland (invited), Abstract C12A-03 presented at the 2015 Fall Meeting, AGU, San Francisco, CA, 14-18 Dec. 2015

L. Stearns, **G. Catania**, R. Walker, J. Nash, E. Shroyer, D. Sutherland, Linking fjord-glacier dynamics through an investigation of subglacial discharge in West Greenland (invited), 2015 PARCA Meeting (NASA Goddard).

Catania, G., M. Fried*, T. Bartholomaus°, L. Stearns, J. Nash, E. Shroyer, D. Sutherland, and R. Walker, Interdisciplinary progress in understanding ice-ocean interactions in central west Greenland (invited) PARCA Annual Meeting (NASA Goddard), Greenbelt MD, 20-22 Jan. 2014.

J. MacGregor, M. Fahnestock, **G. Catania**, J.D. Paden, S. Gogineni, S. Rybarski†, K. Young†, A. Mabrey†, B. Wagman*, Radiostratigraphy of the Greenland ice sheet (Invited), Abstract C53D-05 presented at 2013 Fall Meeting, AGU, San Francisco, CA, 9-13 Dec.

G. Catania, L. Andrews*, R. Hawley, M. Hoffman, M. Lüthi, T. Neumann, Observations of subglacial water pressure and velocity in the ablation region of Greenland (invited), Abstract C11A-03, presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

G. Catania, C. Hulbe, H. Conway, T. Scambos and C. Raymond, Mass flux variability of the Ross Sea ice streams over the last millennium (invited), 8th WAIS workshop, Loveland CO, Sept. 2011.

G. Catania, M. Hoffman, T. Neumann, L. Andrews*, Understanding the influence of supraglacial lakes in Greenland using surface-based geophysics and a physical model (Invited), AGU Fall Meeting 2010, C14A-07.

G. Catania, J. Buttles, and D. Mohrig, An analogue model for subglacial hydrology (invited), AGU Fall Meeting, Abstract C12A-04, San Francisco CA 10-15 Dec. 2009.

G. Catania, T. Neumann, C. Hulbe, H. Conway, Understanding changes in the subglacial environment from radar-derived internal layers (invited), Fall Meeting 2008, Abstract C42A-04.

S. Anandakrishnan, **G. Catania**, R.B. Alley, H. Horgan, J.P. Winberry, Discovery of till deposition at the grounding line of Whillans Ice Stream and implications for ice stream stability (invited), AGU, C51C-05 2006.

CONFERENCE PROCEEDINGS (last 3 years):

○ indicates UT post-doc advisee
* indicates UT graduate student advisee
† indicates UT undergrad advisee

2022

J. Christian, A. Robel, **G. Catania**, Z. Rashed, V. Verjans, A probabilistic framework for quantifying the role of anthropogenic climate forcing in marine-terminating glacier retreats, International Glaciological Society Meeting, Iceland.
M. Zeh, **G. Catania**, P. Wilson, M. Ballard, M. Davis, D. Duncan, Towards the determination of appropriate sampling schemes within tidewater glacier fjords, presented at the Acoustical Society of America Meeting,

Nashville TN, Dec 5-9, 2022.

J. Christian, A. Robel, **G. Catania**, L. Simkins, L. Stearns, Can sedimentation pause marine-ice-sheet retreat over retrograde slopes? A case study on Pine Island Trough, Abstract presented at the AGU Fall 2022 Meeting, Chicago

K. Shionalyn, **G. Catania**, D. Trugman, Forecasting Glacier Terminus Retreat Using Machine Learning, Abstract presented at the AGU Fall 2022 Meeting, Chicago

E. Zhang, **G. Catania**, D. Trugman, AutoTerm: An automated termini dataset delineated from Big Data based on Deep Learning, Abstract presented at the AGU Fall 2022 Meeting, Chicago.

T. Bartholomaus, **G. Catania**, D. Pyles, Complete time series of gap-free velocity fields for Greenland outlet glaciers, Abstract presented at the AGU Fall 2022 Meeting, Chicago.

M. Pascale, D. Felikson, **G. Catania**, Seasonality with a chance of retreat: Quantifying the impact of seasonal forcings on the timing of Greenland Ice Sheet outlet glacier terminus retreat, Abstract presented at the AGU Fall 2022 Meeting, Chicago.

2021

G. Catania, E. Carnahan*, T. Bartholomaus, Time-resolved, 20-year, contrasting glacier response to ocean forcing, Abstract C25A-0874 presented at the AGU Fall 2021 Meeting, New Orleans

G. Catania, L.A. Stearns, C. Carr, K. Poinar, R. Datta, L.M. Simkins, and C. Florentine, Increasing Retention of Minoritized Genders in the Cryospheric Sciences, Abstract C21A-08 presented at the AGU Fall 2021 Meeting, New Orleans

K. Shionalyn*, **G. Catania**, B. Csatho, D. Felikson, Workflow for generating ASTER DEMs to assess elevation change for Greenland's marine-terminating outlet glaciers, Abstract C25A-0875 presented at the AGU Fall 2021 Meeting, New Orleans

J. Christian∘, A. Robel, **G. Catania**, Disentangling natural versus anthropologically-forced retreat of marine-terminating outlet glaciers, Abstract C35A-0860 presented at the AGU Fall 2021 Meeting, New Orleans

M. Zeh*, P.S. Wilson, **G. Catania**, M.S. Ballard, Acoustic characterization of processes occurring at tidewater glaciers via active and passive multi-channel underwater acoustic recordings, Abstract NS12A-01 presented at the AGU Fall 2021 Meeting, New Orleans

H. Fricker and **G. Catania**, Building a better cryosphere community for everyone, Abstract C21A-01 presented at the AGU Fall 2021 Meeting, New Orleans

T.C. Bartholomaus, D. Pyles, **G. Catania**, Mass continuity constraints on outlet glacier surface mass balance in Greenland, Abstract C43A-05 presented at the AGU Fall 2021 Meeting, New Orleans

2020

S. Rezvanbehbahani, L.A. Stearns, **G. Catania**, D. Felikson, C.J. van der Veen, Using machine learning to identify drivers of heterogeneous behavior in Greenland outlet glaciers, Abstract C004-0011 presented at the AGU Fall 2020 Meeting Online

S. Goliber*, T.E. Black, J. Lea, D.L. Cheng, **G. Catania**, IcePicks: a collaborative database and toolset for identifying Greenland outlet glacier termini, Abstract C004-0016 presented at the AGU Fall 2020 Meeting

Online

J.E. Christian$\circ$, A. Robel, C. Proistosescu, G. Roe, M. Koutnik, K.A. Christianson, **G. Catania**, Distinct outlet-glacier responses to surface-mass-balance and ocean variability, Abstract C040-05 presented at the AGU Fall 2020 Meeting Online

A. Robel, S. Pegler, **G. Catania**, D. Felikson, L.M. Simkins, Illusory stability of marine-terminating glaciers at bedrock peaks, Abstract C004-0001 presented at the AGU Fall 2020 Meeting Online

S. Goliber*, **G. Catania**, T. Black, IcePicks: a collaborative database of Greenland outlet glacier termini, Abstract 11237, EGU 2020.

2019

L.A. Stearns, C.J. van der Veen, **G. Catania**, D.C. Finnegan, Glacier weather vs glacier climate: At what scale do we need to parameterize calving?, Abstract C32A-01 presented at the 2019 Fall AGU meeting, San Francisco CA, Dec 9-13, 2019.

E. Carnahan*, **G. Catania**, and T.C. Bartholomaus, Evolution of Greenland marine-terminating glacier dynamics throughout a 30-year period of stability and retreat, Abstract C41C-1476 presented at the 2019 Fall AGU meeting, San Francisco CA, Dec 9-13, 2019.

M.S. Christoffersen†, J.W. Holt, **G. Catania**, M. Truffer, S.A. Goliber*, C. Larsen, A mass-conserving bed solution for the Hubbard glacier from airborne radar data, Abstract C43B-08 presented at the 2019 Fall AGU meeting, San Francisco CA, Dec 9-13, 2019.

TEACHING EXPERIENCE

Earth in 2100 This online-only for-credit course is designed for non-major undergraduates to get a sense of the challenges and opportunities associated with climate change and resource use. Students are exposed to introductory-level background on the topics of climate science, global climate change impacts, energy use and the coming energy transition, and how to solve the climate crisis. Students pick the topics of most interest in a choose-your-own-adventure mode. Course is self-paced. Course currently meets University Core Curriculum requirements for Natural Sciences and Technology and carries an Ethics Flag. **Taught every year from S2018; Enrollment: 250-500**

Proposal Writing This graduate-level required course is aimed at providing proposal preparation experience to new graduate students in the JSG. Students prepare proposals for review and participate in a mock panel evaluating all proposal ideas. Students also discuss graduate school expectations, scientific writing and presentations, and how to come up with ideas in a group setting. **Taught every year from S2018 to S2020; enrollment $\sim$30**

Preparing Future Geoscience Faculty This seminar course covers the academic job market and provides graduate students in the Jackson School of Geoscience with a work-shopped application package at the end of term. Students develop a career toolkit to enable them to thrive in an academic setting. **Taught every other year from F2016; enrollment: $\sim$15**

Introduction to the Cryosphere (Writing and Quantitative Reasoning flags) This is a team-taught course (Catania's load is 1/2) providing a broad overview of the cryosphere and its role in the climate system. The course examines all of Earth's cryosphere including ice sheets, glaciers, permafrost, snow and sea-ice as well as ice on other planets in our solar system. The course is intended for junior or senior-level undergraduates in the Geosciences and graduate students interested in a broad overview of the cryosphere. This is

the first general cryosphere course taught at UT. **Taught F2014; F2016; enrollment: ∼15**

Glaciology This course addresses the fundamentals of glacier and ice-sheet dynamics and the key surface- and subsurface processes that drive ice to move. Course content includes derivation of glacier mass and energy balance, the material properties and rheology of ice, the basic equations of ice motion (with a review of conservation laws), ice-sheet and -shelf flow, basal processes, glacier hydrology, and unstable modes of flow. This course is intended for any graduate-level or senior undergrad student interested in the deformation of natural materials and ice in the environment. Course topics adjust to new and important findings from recent literature and conference proceedings. This is the first Glaciology course taught at UT. **Taught S2010; F2011; F2015; F2019; enrollment ∼10**

POSTDOCTORAL ADVISING

Name	Supervision Period	Funding Source	Present Position
Enze Zhang	09/21 - present	UTIG Postdoc Fellowship	n/a
John Christian	09/20 - present	UTIG Postdoc Fellowship	n/a
Dan Lalich	01/18-07/18	NSF Funding to Catania	Cornell Postdoc
Elizabeth Logan	01/17-01/18	NSF Funding to Catania	Exxon Scientist
Tim Bartholomaus	01/14-01/16	UTIG Postdoc Fellowship	Faculty, Univ. Idaho
Jason Gulley	01/11-01/13	NSF Postdoc Fellowship	Faculty, Univ. S. Florida
Joe MacGregor	09/10-05/13	NSF Funding to Catania	Research Scientist, NASA
Charles Webb	05/07-05/10	NASA Funding to Catania	Program Executive, NASA

DOCTORAL STUDENT ADVISING

Name	Date of Supervision	Role	Current Status
Mikayla PascualUT-JSG	09/22-present	Comm. Chair	doctoral pre-candidate
Allie StephensUT-JSG	09/22-present	Comm. Chair	doctoral pre-candidate
Kevin Shionalyn(UT-JSG)	09/21-present	Comm. Chair	doctoral pre-candidate
Matthew Zeh(UT-CAEE)	09/19-present	Comm. Chair	doctoral candidate
Corinne Vassalo(UT-JSG)	09/19-present	Comm. Member	doctoral pre-candidate
Kathleen Wilson(UT-JSG)	05/18-present	Comm. Member	doctoral candidate
Sophie Goliber(UT-JSG)	9/17-present	Comm. Chair	doctoral candidate
Eric Petersen(UT-JSG)	10/14 - 09/18	Comm. Member	U. Arizona Postdoc
Denis Felikson(UT-ASE)	09/13-07/18	Comm. Chair	Faculty Morgan State Univ./NASA
Mason Fried(UT-JSG)	09/13-05/18	Comm. Chair	ICF International
Hongyu Zhu(UT-ICES)	04/14-09/17	Comm. Member	United Tech. Research Cnt.
Dan Lalich(UT-JSG)	10/15-05/17	Comm. Member	Cornell postdoc
David Rounce(UT-CAEE)	09/09-05/16	Comm. Member	Faculty Carnegie Mellon
Rachel Chisolm (UT-CAEE)	09/09-07/16	Comm. Member	Engineer - City of Austin
Toby Issac(UT-ICES)	09/13- 09/15	Comm. Member	Faculty Georgia Tech
Elizabeth Logan(UT-JSG)	09/10-10/15	Comm. co-Chair	Exxon Scientist
Lauren Andrews(UT-JSG)	09/09-10/15	Comm. Chair	Research Scientist, NASA
Marcelo Somos(UT-CAEE)	09/11-07/14	Comm. Member	Faculty Univ. de La Frontera
Kelly Hereid(UT-JSG)	06/10-05/12	Comm. Member	Research Scientist Tempest Re
Audrey Sawyer(UT-JSG)	06/09-05/11	Comm. Member	Faculty, Ohio State
Robert Harpold(UT-JSG)	09/08-05/10	Comm. Member	NASA-Goddard Sr. Engineer

MASTERS STUDENT ADVISING

Name	Date of Supervision	Role	Current Status
Evan Carnahan(UT-JSG)	01/19-06/21	Comm. Chair	UT PhD Student
John Swartz(UT-JSG)	04/13-08/14	Comm. Member	Water Institute
Benjamin Wagman(UT-JSG)	09/10-05/12	Comm. Chair	Lawrence-Livermore Scientist
Kathleen Negrito(UT-UTeach)	06/08-01/09	Comm. Chair	AISD Teacher
Ryan Elmore(UT-JSG)	12/07-12/08	Comm. Member	Exxon-Mobil
Julie Rumrill(UVM-Geo)	09/06-09/08	Comm. Member	USouth. Conn. Lecturer

UNDERGRADUATE STUDENT ADVISING

*indicates honors student

Name	Date of Supervision	Institution	Role
Caroline Mackin	09/21 - present	UT-DGS	Adviser
Anurag Kulkarni	01/21 - present	UT-DGS	Adviser
Helene Olsen	05/20 - present	UT-MSI	Adviser
Lucero Casteneda	05/20 - 05/21	Harvard	Adviser
Katherine Li	04/19 - 05/20	UT-EVS	Adviser
Gene Hsu	01/15-01/17	UT-GEH	Adviser
David Peters	01/15-05/16	UT-GEO	Adviser
S. David Comer	09/15-08/16	UT-EVS	Adviser
Andrea Jimenez	09/14-05/16	UT-EVS	Adviser
Daniel Le*	01/11-05/14	UT-GEO	Adviser
Alex Mabrey*	09/11-05/13	UT-GEO	Adviser
Jesse Berney*	01/12-05/13	UT-GEO	Committee Member
John DeSanto*	01/12-05/13	UT-GEO	Committee Member
Jamie Clark	05/11-10/11	Fort Valley State Univ.	Adviser
Alan Andrews	06/10-01/11	UT-GEO	Adviser
Michael Markowski	06/10-05/11	UT-GEO	Adviser

HONORS & AWARDS TO SUPERVISED STUDENTS

2021 UT-UTIG Ewing-Worzel Fellowship - Sophie Goliber
2021 UT Brunton Award - Sophie Goliber
2020 UTIG Research Assistant Award - Helene Olsen
2019 International Association of Cryospheric Sciences Early Career Scientist Award - Denis Felikson
2019 UT Jackson Scholarship - Evan Carnahan
2018 UT-UTIG Ewing-Worzel Fellowship - Sophie Goliber
2018 NASA Earth and Space Science Fellowship - Sophie Goliber
2018 UT-DGS Best Graduate Student PhD Talk - Mason Fried
2017 UT Graduate Student Summer Fellowship - Mason Fried
2017 UT-UTIG Best Graduate Student - Mason Fried
2016 AGU Cryosphere Student Innovation Award - Denis Felikson
2016 UT-UTIG Ewing-Worzel Fellowship - Denis Felikson
2016 UT-UTIG Ewing-Worzel Fellowship - Mason Fried
2016 UT-JSG Best PhD poster - Mason Fried
2016 UT-EVS Funding for presenting research at international meeting - S. David Comer
2014 UT-DGS Tech Sessions Best PhD Student Presentation - Lauren Andrews
2012 UT-DGS Tech Sessions Best MS Student Presentation - Benjamin Wagman
2012 UT-UTIG Gale White Fellowship - Lauren Andrews
2012 UT-DGS Ronald DeFord Field Scholarship - Lauren Andrews
2012 Devon Energy Corporation Fellowship - Lauren Andrews
2010 UT-UTIG Ewing-Worzel Fellowship - Lauren Andrews

PROFESSIONAL SERVICE

Internal Service (UT-Austin)

Executive Committee, Institute for Geophysics	09/21 - present
Awards Committee, Institute for Geophysics	01/20 - present
Faculty Grievance Hearing Pool, UT-wide	10/19 - present
Endowment Committee (UTIG Representative), Jackson School of Geosciences	09/19 - present
UTIG Research Associate Hiring Committee (three positions)	09/20 - 04/21
Ad-hoc Mentoring Committee, Dept. of Geosciences	01/21 - 04/21
Annual Review Committee, Institute for Geophysics (Chair)	01/20 - 01/21
Department Chair Search Committee (DGS)	05/20 - 07/20
PT2050 Faculty Search Committee Member, College of Engineering	10/19 - 05/20
Dean Search Committee, Jackson School of Geosciences	03/19 - 10/19
DGS Handbook creation, Dept. of Geosciences	06/19 - 09/19
Seminar Committee Member, Institute for Geophysics	10/16 - 09/19
Writing Flag Committee Member, University of Texas	09/16 - 09/19
Climate Science Search Committee Chair, Dept. of Geoscience	09/18 - 05/19
Annual Performance Evaluation Committee (Chair in 2018), Institute for Geophysics	01/17 - 01/19
Dept. of Geosciences Executive Committee Member (Assoc. Chair)	10/16 - 09/18
Program Leader: Water, Climate and the Environment, Dept. of Geosciences	10/16 - 09/18
Structural Geology Search Committee Member, Dept. of Geoscience	09/17 - 09/18
Graduate Student Fellowship Committee Member, Institute for Geophysics	09/16 - 09/18
Hydrologist Search Committee Member, Dept. of Geoscience	09/16 - 05/17
Undergraduate Curriculum Revision Committee Member, Dept. of Geosciences	09/16 - 09/17
JSG Dean Review Committee Member, Jackson School of Geosciences	03/15 - 05/15
Strategic Planning Committee Member, Dept. of Geosciences	01/14 - 01/15
Hydrology and Glaciology Discipline Leader, Dept. of Geosciences	01/13 - 10/14
Annual Performance Evaluation Committee Member, Institute for Geophysics	01/13 - 01/14
Undergraduate Education Committee Member, Dept. of Geosciences	09/09 - 01/14
Postdoctoral Fellowship Committee Member, Institute for Geophysics	09/09 - 01/14
Seminar Series Committee Member, Institute for Geophysics	09/10 - 05/13
Associate Dean Search Committee Member, Dept. of Geosciences	09/12 - 09/13
GSC Membership Ad-Hoc Committee Member, Jackson School of Geosciences	02/12 - 04/12
Hydrogeology Search Committee Member, Dept. of Geosciences	12/10 - 04/11
Oceanography Search Committee Member, Institute for Geophysics	12/10 - 05/11
Climate Scientist Search Committee Member, Jackson School of Geosciences	09/07 - 06/08
UTIG Director Search Committee Member, Institute for Geophysics	09/08 - 05/09

External Service: Referee

(Average 6-7 manuscripts/year, 1-3 proposals/year, 0-1 panels requested/year)

Journals: Annals of Glaciology, Geology, Geophysical Research Letters, Journal of Geophysical Research, Journal of Glaciology, Journal of Hydrology, Earth and Planetary Science Letters, The Cryosphere, Journal of Environmental & Engineering Geophys., Nature, Nature Geosciences, Nature Communications, Quaternary Research, Science, USGS Special Publication on Antarctic Geology.

Proposals: NASA (Cryosphere), NSF (Office of Polar Programs (Arctic and Antarctic), Earth Sciences, Major Research Instrumentation and Division of Mathematical Sciences), NERC (UK), National Geographic Society.

Panel member: NASA New Investigator Program, NASA Measures, NASA IPY, NSF OPP Post-doc Fellowships, NSF Arctic Natural Sciences Committee of Visitors, NSF Antarctic Integrated System Sciences

External Service: Other

Founder of Minoritized Genders in the Cryosphere Slack Channel	06/21 - present
Sub-Committee to Advance Diversity & Inclusion for NSF Polar Programs	09/20 - present
Associate Editor for The Cryosphere journal	03/18 - present
West Antarctic Ice Sheet Initiative Early-Career Mentor	09/20 - 05/22
APECS Early Career Panel Member AGU Fall Meeting	12/19
Antarctic Sciences Section Committee of Visitors review, NSF	01/20 - 04/20
NASA's Earth Science Advisory Committee member	09/17 - 09/19
CLIVAR Greenland Ice Sheet working group member	11/10 - 05/13
Associate Editor for Journal of Glaciology	07/12 - 05/13
APECS Early Career Panel Member AGU Fall Meeting	12/12
Glaciology representative for the McMurdo Area Users Committee	03/08-05/11

OUTREACH AND INCLUSION ACTIVITIES

Lakeway Women's Club presentation on ice sheets	02/22
UT-LAMPS presentation on Ice sheets and the IPCC	02/22
Founder of the JSG Geoscience Empowerment Network	01/18 - present
Keynote for Women in Science and Engineering Conference, Texas State	03/18
Invited faculty speaker for UT-SURGe (undergrad. research group)	04/13
Invited faculty speaker for Camp Texas	07/12
Invited speaker UT-Geoscience Honors Research Program	02/12
Invited speaker on Greenland change for TXESS Revolution Program	10/10
Member of National Association of Geoscience Teachers climate education task force	2010
Invited speaker for workshop on teaching Antarctic science, Austin TX	11/09
Climate Change, Ice Sheets and the Media, SXSW Interactive Festival	03/09
Climate and Ice Sheets presentation for Unitarian Church, Austin TX	03/09
Extreme Science panel member for GK-12 Geoscience Learning teachers	02/09
NASA Quest Investigator (http://quest.nasa.gov/challenges/lima/index.html),	09/08
UT Hot Science - Cool Talk outreach lecture series,	09/08
Invited speaker on ice sheets and climate, UT Lamp Organization	10/07
Presenter for Expanding Your Horizons Science conference for girls, Austin TX	03/06
Presenter for "Geosciences for Teachers" program, Austin TX	03/06
Presented "Life and Work in Antarctica" at the Burke Museum, Seattle WA	09/00
Participated in Shackleton Exhibit at the Burke Museum, Seattle WA. for K-8 students	09/00

SELECTED PRESS

Op-Ed in EOS: Glacial Knowledge Gaps Impede Resilience to Sea Level Rise	2022
Sediments and Stability: ROV-terminus exploration KXAN: UT researchers sending undersea robot to investigate icy uncharted waters	2022
Op-Ed in Dallas Morning News: Power outages show why Texas must prepare for climate change	2021
Texas Standard Radio: Texas Climate Scientists Letter	2021
Steep glacier knickpoints mitigate inland thinning in Greenland Eureka Alert Phys.org: Greenland 'knickpoints' could stall spread of glacial thinning	2020

Op-Ed in The Hill: Melting Ice Sheets Show Need for US Government Action Now 2020

Future Evolution of Greenland's Outlet Glaciers 2019
EOS: Predicting the Future of Greenland's Melting Ice Sheet

Geometry Controls Thinning of Greenland's Glaciers 2017
PNAS Journal Club
phys.org: Glacier shape influences susceptibility to thinning
EGU Blogs: How geometry limits thinning in the interior of the Greenland Ice Sheet

Radar-determined Ice Sheet Stratigraphy 2016
"Ice sheet in peril" Perspective in *Science* Feb. 2016
Science Daily: 3-D view of Greenland Ice Sheet opens window on ice history
Phys.org: Scientists map movement of Greenland Ice during past 9,000 years
National Geographic: Mapping the hidden worlds beneath Greenland's ice

Greenland Hydrology 2014
"Geoscience: The plumbing of Greenland's ice" News & Views *Nature* Oct. 2014
Science Daily: Leaky plumbing impedes Greenland ice sheet flow
Phys.org: Glacial moulin formation triggered by rapid lake drainage

Interviewed by FOX News Austin regarding record July 2012 Greenland melt	07/12
Interviewed by BBC for documentary series "Project Iceberg"	04/12
Press coverage for article on rifting in Amundsen Sea on CNN, Huffington Post and various blogs	04/12
Interviewed for Televisa Mexico regarding ice sheet impacts from warming	11/09
Interviewed for Earth & Sky Radio program #5636	10/08
Presenter for public radio panel regarding the impacts of global warming	04/08
Interviewed by KXAN for release of 4th IPCC Report	02/07
Interviewed by News 8 Austin about Antarctic science	03/07
Participant for IPY press organization Polar-Palooza (passporttoknowledge.com/polar-palooza)	07-08
Interviewed for Soundprint Radio Show and Men's Journal in regards to Antarctic fieldwork	11/07
Interviewed by German Public Radio and the LA Times	06/07
Interviewed by Australian 60 Minutes	10/07
Interviewed for a 'scientist profile' for the monthly VECO Polar newsletter	08/07

PROFESSIONAL MEMBERSHIPS

1996-present	International Glaciological Society - Member
1999-present	American Geophysical Union - Member
2017-present	European Geophysical Union - Member

COLLABORATORS

S. Anandakrishnan (Penn. State); D. Brinkerhoff (Univ. of Montana); T. Bartholomaus (Univ. of Idaho); H. Conway (Univ. of Washington); W. Colgan (GEUS); H. Engelhardt (CalTech -ret.); M. Fahnestock (UAF), H. Fricker (Scripps); O. Ghattas (UT-Austin); S. Gulick (UT-Austin); J. Gulley (Univ. of S. Florida); R. Hawley (Dartmouth University); P. Heimbach (UT-Austin); M. Hoffman (Los Alamos); C. Hulbe (Univ. Otago); I. Joughin (Univ. Washington); R. Jackson (OSU): J. Jaeger (U. Florida); L. Lavier (UT-Austin); M. Luthi (Univ. Zurich); J. Nash (Oregon State); J. MacGregor (NASA); M. Morlighem (UC Irvine); T. Moon (NSIDC); T. Neumann (NASA); C. Paola (Univ. of Minnesota); S. Price (Los Alamos); C. Raymond (Univ. of Washington); T. Scambos (NSIDC); D. Shean (Univ. of Washington); E. Shroyer (Oregon State); L. Stearns (UKansas); F. Straneo (Scripps); D. Sutherland (UOregon); S. Tulaczyk (UCSC); M. van den Broeke (Utrecht); R. Walker (NASA); D. Winebrenner (Univ. Washington)