

GINNY CATANIA

University of Texas, Jackson School of Geosciences

10100 Burnet Rd., Bldg. 196, Austin TX, 78751, USA.

(512) 471-0403

gcatania@ig.utexas.edu

http://www.catania-ice.org

PROFESSIONAL POSITIONS HELD

- 2013-present** Associate Professor, Dept. of Geosciences, University of Texas
2013-present Research Scientist, Institute for Geophysics, University of Texas
2009-2013 Assistant Professor, Dept. of Geosciences, University of Texas
2005-2013 Research Associate, Institute for Geophysics, University of Texas
2004-2005 Postdoctoral Scholar, Earth Sciences, Univ. of California (Santa Cruz)
1999-2004 Teaching and Research Assistant, Geophysics, University of Washington
1995-1997 Teaching Assistant, Geology, University of Minnesota

EDUCATION

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

RESEARCH STATEMENT

My research program focuses on understanding the physics of glacier motion in order to improve our understanding of ice sheet mass loss. I am particularly interested elucidating the ice sheet/glacier changes that arise from either natural or forced variability. In addition, I also examine the basic physical processes that control ice motion and determine the history of ice flow to put into context recent changes occurring in the polar regions. My group employs a suite of techniques to pursue these research interests including ground-based geophysics (GPS, radar, borehole techniques), remote-sensing analysis and laboratory experiments.

HONORS & AWARDS

- 2015** UTIG Director's Circle of Excellence Award
2014 Performance Award for an Assistant Professor, Dept. of Geosciences, University of Texas
2012 UTIG Director's Circle of Excellence Award
2009 UTIG Outstanding Research Scientist
2007 Jackson School of Geosciences Research Excellence Fellowship
2002 University of Washington Johnston Research Fellowship
1997 Outstanding Teaching Award, University of Minnesota
1996 Gibson Hydrogeology Endowment, University of Minnesota

PUBLISHED ARTICLES:

Researcher ID: B-9787-2008; **Total citations:** 1164

Google Scholar h-index: 21; **ISI h-index:** 17

* indicates UT graduate student advisee

o indicates UT post-doc advisee

† indicates UT undergrad advisee

1. E. Rignot, I. Fenty, Y. Xu, C. Cai, I. Velicogna, C. O'Colfaigh, J. Dowdeswell, W. Weinrebe, **G. Catania**, D. Duncan, *in review*, Multi-beam echo sounding of Uummanaq and Vaigat fjords, West Greenland, *Geophysical Research Letters*.
2. T. Bartholomaeus^o, L. Stearns, D. Sutherland, E. Shroyer, J. Nash, R. Walker, **G. Catania**, D. Felikson*, D. Carroll, M. Fried*, B. Noel, M. van den Broeke, *in review*, Contrasts in the response of adjacent fjords and glaciers to surface melt in Western Greenland, *Annals of Glaciology*.
3. J. MacGregor, W. Colgan, M. Fahnestock, M. Morlighem, **G. Catania**, J. Paden, S. Gogineni, *in review*, Holocene deceleration of the Greenland Ice Sheet, *Science*.

4. M. Fried*, **G. Catania**, T. Bartholomaeus^o, D. Duncan, M. Davis, L. Stearns, J. Nash, E. Shroyer, D. Sutherland, R. Walker, *in review*, Subglacial discharge drives heterogeneous submarine melt at a Greenland tide-water glacier. *Geophysical Research Letters*.
5. 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*, doi: 10.1002/2014JF003418.
6. 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(8), 2169-2185.
7. 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-ice and cryo-hydrologic warming, *The Cryosphere*, 9(1), 245-253.
8. 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*, doi:10.1002/2014JF003215.
9. 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*, doi:10.1002/2013JF003067.
10. 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.
11. 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.
12. C. Rössli, 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.
13. 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.
14. 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:10.5149/tc-7-1869-2013.
15. J.A. MacGregor^o, **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), doi:10.3189/2013JoG13J050.
16. J.D. Gulley^o, 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*, doi:10.1002/esp.3447.
17. L. Logan*, **G. Catania**, E. Choi, L. Lavier, 2013, A novel method for predicting fracture in floating ice, *Journal of Glaciology*, 59(216), doi:10.3189/2013JoG12J210.
18. B. Wagman*, **G. Catania**, 2013, Impact of subglacial hydrology on force balance for a physically-modeled ice stream, *Annals of Glaciology*, 54(63), doi:10.3189/2013AoG63A345.
19. 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*, doi:10.1175/BAMS-D-12-00100.

20. 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.
21. J.D. Gulley^o, 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.
22. J.D. Gulley^o, 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.
23. **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.
24. J.A. MacGregor^o, **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, profiled paper*, **58**(209), 458-466.
25. 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), 10.1029/2010JF001934.
26. 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.
27. J.A. MacGregor^o, 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.
28. **G. Catania**, C. Hulbe and H. Conway, 2010, Grounding line basal melt rates from radar-derived internal stratigraphy, *Journal of Glaciology*, **56**(197), p. 545-554.
29. **G. Catania**, T. Neumann, 2010, Persistent englacial drainage features in the Greenland Ice Sheet, *Geophysical Research Letters*, **37**(L02501), doi:10.1029/2009GL041108.
30. 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**, P. 98-104.
31. 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.
32. **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), p.567-578, (profiled paper).
33. 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), p. 213-219, (profiled paper).
34. S. Anandakrishnan, **G. Catania**, R. Alley and H. Horgan, 2007, Discovery of till deposition at the grounding line of Whillans Ice Stream, *Science*, 315, doi:10.1126/science.1138393, 1835-1838.
35. **G. Catania**, T. Scambos, H. Conway and C. Raymond, 2006, The sequential stagnation of Kamb Ice Stream, West Antarctica, *Geophysical Research Letters*, **22** (L14502), doi:10.1029/2006GL026430.
36. **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**, doi:10.1029/2005JF000355
37. 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), p. 3-10.

38. I. Joughin, R. Bindshadler, 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.
39. **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), p. 423-431.
40. **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.
41. 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.
42. H. Conway, **G. Catania**, C. Raymond, A. Gades, T. Scambos, H. Engelhardt, 2002, Switch of flow direction of an Antarctic ice stream, *Nature*, **419**, p. 465-467.
43. **G. Catania** and C. Paola, 2001, Braiding under glass, *Geology* (cover story), **29**(3), 259-262.

INVITED TALKS

Scripps Institute of Oceanography - Geophysics Seminar Speaker, Apr. 2013.
 WHOI-Joint Program Seminar Speaker, Feb. 2013.
 University of Oregon Geology Department Seminar Speaker, Eugene OR, Oct. 2012.
 Stanford Geophysics Seminar Speaker, CA, Jan 2011.
 UT-Dallas Geology Department Seminar Speaker, TX, Sept. 2010.
 Center for Space Research Seminar Speaker, UT-Austin, Oct. 2010.
 UT-San Antonio Geology Department Seminar Speaker, TX, Oct. 2010.
 Joint UT-Canada Conference on collaborative responses to climate change policy, TX, April. 2010.
 Columbia University and City University of New York Seminar Speaker, Nov. 2009.
 University of Illinois- Champaign-Urbana Geology Department Seminar Speaker, Sept 2009.
 California Institute of Technology Geology Department Seminar Speaker, April 2009.
 University of Michigan Geology Department Seminar Speaker, January 2009.
 Center for Space Research Seminar Speaker, April 2007.
 Duke University Geology Department Seminar Speaker, February 2007.
 UTIG Seminar Speaker, July 2005.

CONFERENCE PROCEEDINGS:

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

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, 2015 PARCA Meeting (NASA Goddard). Greenbelt, Maryland, 27-28 Jan. **Invited talk**

T. Bartholomaeus[◦], **G. Catania**, L. Stearns, E. Shroyer, D. Sutherland, J. Nash, R. Walker, M. Fahnestock, L. Byers, M. Fried*, 2015, Multidisciplinary observations of iceberg calving at Rink Isbrae, West Greenland. PARCA Annual Meeting (NASA Goddard), Greenbelt, Maryland, 27-28 Jan. (poster).

T. Bartholomaeus[◦], **G. Catania**, R. Walker, L. Stearns, D. Felikson*, M. Fahnestock, R. Cassotto, J. Nash, E. Shroyer, D. Sutherland, High resolution velocity observations and model results reveal a strong bed at stable, tidewater Rink Isbrae, West Greenland, IGS Symposium on Contemporary ice-sheet dynamics, Cambridge, UK, 16-21 Aug.

D. Felikson*, T. Bartholomaeus^o, **G. Catania**, D. Carroll, D. Sutherland, E. Shroyer, N. Korsgaard, K. Kjaer, M. van den Broeke, L. Stearns, J. Nash, R. Walker, External forcing and geometric controls on surface elevation changes of central-west Greenland outlet glaciers, IGS Symposium on Contemporary ice-sheet dynamics, Cambridge, UK, 16-21 Aug.

2014

D. Felikson*, **G. Catania**, T. Bartholomaeus^o, L. Stearns, N. Korsgaard, K. Kjaer, J. Nash, E. Shroyer, D. Sutherland, R. Walker, Spatial variability in surface elevation changes of Central-West Greenland outlet glaciers, Abstract C23C-0418 presented at 2014 Fall Meeting, AGU, San Francisco, CA, 15-19 Dec.

L. Logan*, L. Lavier, E. Choi, E. Tan, **G. Catania**, DynEarthSol3D: numerical studies of basal crevasses and calving blocks, Abstract C33A-0367 presented at 2014 Fall Meeting, AGU, San Francisco, CA, 15-19 Dec.

J. MacGregor, M. Fahnestock, **G. Catania**, J. Paden, S. Gogineni, M. Morlighem, W. Colgan, J. Li, D. Stillman, R. Grimm, G. Clow, K. Young[†], A. Mabrey[†], S. Rybarski[†], B. Wagman*, K. Rodriguez, The Greenland Ice Sheet in three dimensions, Abstract C24B-03 presented at 2014 Fall Meeting, AGU, San Francisco, CA, 15-19 Dec.

M. Fried*, **G. Catania**, T. Bartholomaeus^o, C. Black[†], D. Duncan, M. Davis, L. Stearns, J. Nash, E. Shroyer, D. Sutherland, R. Walker, Runoff routing beneath marine-terminating glaciers in Central-West Greenland, Abstract C44B-07 presented at 2014 Fall Meeting, AGU, San Francisco, CA, 15-19 Dec.

T. Bartholomaeus^o, C. Larsen, S. O'Neel, M. West, J. Amundson, J. Walter, **G. Catania**, L. Stearns, R. Walker, D. Sutherland, E. Shroyer, J. Nash, Seismic tremor reveals subglacial discharge at tidewater glaciers, Abstract C32B-05 presented at 2014 Fall Meeting, AGU, San Francisco, CA, 15-19 Dec.

D. Sutherland, **G. Catania**, T. Bartholomaeus^o, J. Nash, E. Shroyer, R. Walker, L. Stearns, 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, CA, 15-19 Dec.

Sutherland, D.A., **G. Catania**, L. Stearns, J. Nash, E. Shroyer, and R. Walker, 2014 PARCA Meeting (NASA Goddard), Using a coupled observational and modeling approach to investigate buoyant plume structure in two adjacent west Greenland outlet glacial fjords.

Catania, G., M. Fried*, T. Bartholomaeus^o, L. Stearns, J. Nash, E. Shroyer, D. Sutherland, and R. Walker, 2014 PARCA Meeting (NASA Goddard), Interdisciplinary progress in understanding ice-ocean interactions in central west Greenland. ***Invited**

L. Andrews*, **G. Catania**, M. Hoffman, J. Gulley, M. Lüthi, C. Ryser, R. Hawley, T. Neumann, Direct observations of evolving subglacial drainage beneath the Greenland Ice Sheet, Abstract 70A0936 presented at the IGS Symposium on the Contribution of Glaciers and Ice Sheets to Sea-Level Change, Chamonix France, 26-30 May, 2014.

L. Logan*, L. Lavier, E. Choi and **G. Catania**, DynEarthSol3D: unstructured finite-element method to study visco-elasto-plastic ice dynamics, Abstract 70A0949 presented at the IGS Symposium on the Contribution of Glaciers and Ice Sheets to Sea-Level Change, Chamonix France, 26-30 May, 2014.

2013

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, Abstract C53D-05 presented at 2013 Fall Meeting, AGU, San Francisco, CA, 9-13 Dec. ***Invited**

2012

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, Abstract C11A-03, presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec. ***Invited**

J. MacGregor^o, M. Fahnestock, **G. Catania**, J.D. Paden, B. Wagman*, S. Rybarski[†], K. Young[†], A. Mabrey[†], Radiostratigraphy of the Greenland ice sheet from the 2009-2012 Operation IceBridge surveys, Abstract C12B-03 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

B. Morriss, R. Hawley, **G. Catania**, L. Andrews*, M. Funk, M. Lüthi, T. Neumann, A ten-year record of supraglacial lake evolution and rapid drainage in West Greenland, Abstract C13H-06 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

A. Mabrey[†], **G. Catania**, J. MacGregor^o, S. Young[†], S. Rybarski[†], Relationships between the internal stratigraphy and ice flow of the Greenland Ice Sheet, Abstract C21B-0598 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

Daniel Le[†], **G. Catania**, L. Andrews*, Remote sensing characterization of glaciers in the N. Himachal Pradesh, Abstract C23A-0636 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

J. Nowinski*, **G. Catania**, L. Andrews*, J. Gulle^o, J. MacGregor^o, R. Hawley, M. Hoffman, M. Lüthi, T. Neumann, Assessment of moulin head variations and subglacial conduit connectivity in the Greenland ablation zone, Abstract C23C-0670 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

C. Ryser, M. Lüthi, M. Funk, **G. Catania**, L. Andrews*, R. Hawley, T. Neumann, M. Hoffman, Caterpillar-like flow of the Greenland Ice Sheet: observations of basal control on ice motion, Abstract C33B-0662 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

L. Logan*, **G. Catania**, L. Lavier, E. Choi, A novel method for estimating basal crevasse height and subsequent rifting, Abstract C33E-08 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

L. Andrews*, **G. Catania**, M. Hoffman, R. Hawley, M. Lüthi, T. Neumann, Subglacial channel evolution observed in western Greenland from moulin water levels and GPS-derived surface velocities, Abstract C43C-0620 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

B. Wagman* and **G. Catania**, Impact of subglacial hydrology on the force balance of a physically modeled ice stream, Abstract 63A345, IGS Symposium on Glaciers and Ice Sheets in a Warming Climate, Fairbanks, AK, 24-29 June 2012.

L. Logan*, **G. Catania**, L. Lavier and E. Choi, Observations and modeling of grounding line basal crevasses and their ice dynamic implications, Abstract 63A292, IGS Symposium on Glaciers and Ice Sheets in a Warming Climate, Fairbanks, AK, 24-29 June 2012.

J. MacGregor^o, M. Fahnestock, **G. Catania**, S. Price, J. Paden, The gap between ice-penetrating radar observations and the boundary conditions used in ice-sheet models, Abstract EGU2012-1033, presented at 2012 EGU General Assembly, Vienna, Austria, 22-27 April.

F. Walter, S. Husen, M. Meier, K. Plenkers, S. Hiemer, C. Ryser, M. Lüthi, M. Funk, **G. Catania**, and J. Clinton, Seismology on the Greenland ice sheet: results from the deployment of a high-density campaign seismic network in 2011, Abstract EGU2012-7465, presented at 2012 EGU General Assembly, Vienna, Austria, 22-27 April.

M. Lüthi, C. Ryser, **G. Catania**, M. Hoffman, R. Hawley, M. Funk, T. Neumann, A. Bauder, L. Andrews*, and B. Morriss, Diurnal ice deformation variability driven by subglacial water pressure: Observations from boreholes at the margins of the Greenland Ice Sheet, Abstract EGU2012-7069, presented at 2012 EGU General Assembly, Vienna, Austria, 22-27 April.

2011

J.A. MacGregor^o, **G.A. Catania**, M.A. Fahnestock, S.F. Price, J.D. Paden, The gap between ice-penetrating radar observations and the boundary conditions used in ice-sheet models, Abstract C11C-068 presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.

J.D. Nowinski*, **G. Catania**, J.A. MacGregor^o, J.D. Gulley^o, M.J. Hoffman, Seasonal speedup of ice near Swiss Camp, Greenland and the link to surface hydrology, Abstract C11D-0693 presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.

J.D. Gulley^o, M. Grabiec, J.B. Martin, J.A. Jania, **G.A. Catania**, P. Glowack, Effects of discrete basal recharge by moulins on subglacial hydrology, Abstract C11E-0705 presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.

B.F. Morriss, R.L. Hawley, **G.A. Catania**, M. Funk, M.J. Hoffman, M.P. Lüthi, T. Neumann, Pulse-drainage induced surface acceleration near Jakobshavn Isbrae: water availability from supraglacial lakes, Abstract C11E-0708 presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.

B.M. Wagman*, **G.A. Catania**, J. Buttles, The influence of subglacial hydrology on ice stream velocity in a physical model, Abstract C11E-0714 presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.

L. Andrews*, **G.A. Catania**, R.L. Hawley, M.J. Hoffman, B. Morriss, M.S. Markowski[†], M.P. Lüthi, M. Funk, T. Neumann, Spatiotemporal heterogeneity of melt water delivery to the bed of the Greenland Ice Sheet, Abstract C13C-02 presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.

G.A. Catania, M.P. Luethi, L.C. Andrews*, M. Funk, R.L. Hawley, M.J. Hoffman, B. Morriss, T. Neumann, C. Ryser, F.T. Walter, Interpreting summertime speedup of the Greenland ice sheet in the context of borehole observations of the subglacial hydraulic system, Abstract C13C-03 presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.

E. Logan*, **G.A. Catania**, L.L. Lavier, Observations and modeling of grounding line basal crevasses: Connections between surface speed, topography and crevasse morphology, Abstract C23D-0523 presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.

R.L. Hawley, B.F. Morriss, L.C. Andrews*, **G.A. Catania**, M. Funk, M.J. Hoffman, M.P. Lüthi, T. Neumann, New insights in the Pakitsoq region of the Greenland ice sheet from borehole optical televiewer measurements of in-situ ice properties, Abstract C33A-0622 presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.

J.A. MacGregor^o, **G. Catania**, M. Markowski[†], A. Andrews[†], Widespread loss of ice-shelf buttressing in the Amundsen Sea Embayment, West Antarctica between 1972 and 2010, IGS Symposium on the Interaction of Ice Sheets and Glaciers with the Ocean, Scripps CA, June 2011.

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

2010

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

L.C. Andrews*, **G. Catania**, J.L. Buttles, A. Andrews[†], M. Markowski[†], A physical model of ice sheet response to changes in subglacial hydrology, AGU Fall Meeting 2010, Abstract C21B-0543.

J.A. MacGregor^o, **G. Catania**, M. Markowski[†], A. Andrews[†], Evolving ice fronts and surface speeds in the Amundsen Sea Embayment between 1972-2010, AGU Fall Meeting 2010, Abstract C11A-0531.

M.J. Hoffman, T.A. Neumann, G.A. Catania, L.C. Andrews*, Links between acceleration, melting, and supraglacial lake drainage at the western Greenland Ice Sheet, AGU Fall Meeting 2010, Abstract C23B-0619.

2009

G. Catania, J. Buttles, and D. Mohrig, An analogue model for subglacial hydrology, AGU Fall Meeting, Abstract C12A-04 ***Invited**.

G. Catania, T. Neumann and J. Clark[†], Correlating lake drainage and ice velocity near the margin of the Greenland Ice Sheet, AGU, 90(52), Fall Meeting 2009, Abstract C22D-05.

L.C. Sass, S. O'Neel, M.G. Loso, J.A. MacGregor*, **G. Catania**, and C.F. Larsen, Contributions of climate and dynamics to mass wastage and accumulation zone thinning of Eklutna Glacier, Alaska, AGU, 90(52), Fall Meeting 2009, Abstract C32A-04.

T.J. Fudge, **G. Catania**, H. Conway, D.A. Young, D. Blankenship, S. Kempf and E. Leuro, Flow conditions of Thwaites Glacier for the past 1000 years using radar-detected internal layer patterns, AGU, 90(52), Fall Meeting 2009, Abstract C11A-08.

C.E. Webb^o, **G. Catania**, J.G. Sonntag and W.B. Krabill, Changes in the Canadian Arctic Archipelago: Observations from spaceborne and airborne laser altimeters, AGU, 90(52), Fall Meeting 2009, Abstract C42A-07.

C. Hulbe, **G. Catania**, O. Sergienko, M. Fahnestock, Variations in grounding line position on the Gould and Siple Coasts, West Antarctica, over the last 1000 years.

G. Catania, C. Hulbe and H. Conway, Grounding line basal melt rates determined from internal stratigraphy, 16th Joint WAIS/FRISP Workshop, Seattle WA, Sept. 2009.

G. Catania, J. Buttles and D. Mohrig, Analogue modelling of water flow under ice; what can we learn?, 16th Joint WAIS/FRISP Workshop, Seattle WA, Sept. 2009.

T.J. Fudge, **G. Catania**, H. Conway, D. Blankenship, D. Young, S. Kempf and E. Leuro, Past flow conditions of Thwaites Glacier revealed by radar-detected internal layer patterns, 16th Joint WAIS/FRISP Workshop, Seattle WA, Sept. 2009.

2008

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

C. Webb^o, **G. Catania**, R. Schutz, Using spaceborne laser altimetry to assess elevation change in Arctic Canada, AGU, 89(53), Fall Meeting 2008, Abstract C31B-0502.

J. Rumrill, T. Neumann, **G. Catania**, Analysis of spatial and temporal variations in strain rates near Swiss Camp, Greenland, Fall AGU Meeting, Abstract C31C-0523.

C. Hulbe, **G. Catania**, O. Sergienko and M. Fahnestock, Stagnation of Kamb Ice Stream investigated using flow features and numerical models, 2008, IGS Symposium on Radioglaciology, Madrid, Spain, June 2008.

G. Catania, T. Neumann, S. Price, Investigations of moulins with ground-based ice-penetrating radar, 2008, IGS Symposium on Radioglaciology, Madrid, Spain, June 2008.

G. Catania, C. Hulbe, J. Greenbaum*, Evidence of relict ice-shelf rifting and timing of grounding line retreat for Kamb Ice Stream, Antarctica 2008, IGS Symposium on Radioglaciology, Madrid, Spain, June 2008.

G. Catania, H. Conway, C. Raymond, Bed-reflectivity beneath inter-ice stream ridges, West Antarctica, 2008, IGS Symposium on Radioglaciology, Madrid, Spain, June 2008.

G. Catania, T. Neumann, S. Price, Radar and model investigations of englacial drainage through the Greenland Ice Sheet, 2008 NASA-PARCA meeting, Boulder CO, Feb. 2008.

G. Catania, C. Hulbe, J. Greenbaum*. Evidence of relict ice shelf rifts on the grounded ice of Kamb Ice Stream, Antarctica, 2008 NASA-PARCA meeting, Boulder CO, Feb. 2008.

J. Greenbaum*, **G. Catania**, T. Neumann, T. Hess, N. Bangs, Seismic processing for radar sounding of moulins in Greenland, 2008 NASA-PARCA meeting, Boulder CO, Feb. 2008.

T. Neumann, **G. Catania**, J. Rumrill, Surface velocity variation during the 2007 melt season near Swiss Camp, 2008 NASA-PARCA meeting, Boulder CO, Feb. 2008.

2007

G. Catania, C. Hulbe, A modern analogy to relict grounding lines on Kamb Ice Stream, Antarctica, 14th Annual WAIS Workshop, Sterling VA, Sept. 2007.

J. Greenbaum*, **G. Catania**, T. Neumann, N. Bangs, T. Hess, Investigations of near-vertical subsurface structures near Swiss Camp, Greenland, 14th Annual WAIS Workshop, Sterling VA, Sept. 2007.

S. Tulaczyk, C. Tung, **G. Catania**, I. Howat, I. Joughin, B. Smith, R. Jacobel, R. Petterson, M. King and S. Price, Kamb Ice Stream reactivation: Investigations with GPS, 14th Annual WAIS Workshop, Sterling VA, Sept. 2007.

T. Urban, **G. Catania**, R. Schutz, R. Harpold*, C. Webb°, ICESat elevation change detection in Antarctica, IUGG Meeting, Perugia Italy, July 2007.

G. Catania, T. Neumann, Radar across the equilibrium line of the Greenland Ice Sheet: Evidence for surface water drainage, JPL Parca Meeting, January 2007.

T. Neumann, **G. Catania**, J. Rumrill, Seasonal ice acceleration near the Greenland ice sheet margin, Fall AGU, C53A-01.

S. Price, A. Payne, **G. Catania**, T. Neumann, Seasonal acceleration of inland ice via along-flow coupling to marginal ice, Fall AGU Meeting, Abstract C41B-0470.

2006

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, Fall AGU, C51C-05 **Invited**, 2006.

B. Schutz, T. Urban, R. Harpold, J. Chen, B. Gunter, **G. Catania**, Correlated polar change detection from coincident ICESat and GRACE data, Fall AGU Meeting, Abstract G12A-08.

J. Rumrill, T. Neumann and **G. Catania**, Assessing the spatial and temporal extent of velocity variations near Swiss Camp, Greenland, Fall AGU, C11A-1136, 2006.

2005

G. Catania, T. Scambos, H. Conway and C. Raymond, Century-scale ice stream variability: A case study of Kamb Ice Stream, West Antarctica, Fall AGU, C42A-06, 2005.

S. Anandakrishnan, H. Horgan, **G. Catania**, D. Voigt, I. Joughin, Grounding line position of Whillans Ice Stream, West Antarctica, Spring AGU, NS43A-04, 2005.

G. Catania, T. Scambos, H. Conway and C. Raymond, Evidence for rapid ice stream margin migration and sudden narrowing of Kamb Ice Stream, Antarctica, 12th Annual WAIS Workshop, 2005.

As graduate student

G. Catania, H. Conway, T. Scambos, and C. Raymond, Ungrounded conditions in the mouth of Kamb Ice Stream?, 11th Annual WAIS Workshop, 2004.

G. Catania, H. Conway, T. Scambos, and C. Raymond, Flat ice terrain near the mouth of Kamb Ice Stream, 10th Annual WAIS Workshop, 2003.

G. Catania, H. Conway, T. Scambos, and C. Raymond, Duckfoot and Goosefoot: What happened at the lower end of Ice Stream C?, 9th Annual WAIS Workshop, 2002.

G. Catania, H. Conway, A. Gades, C. Raymond and H. Engelhardt, Bed-reflectivity beneath inactive ice streams in West Antarctica, International Symposium on Fast Glacier Flow, 2002.

G. Catania, H. Conway, T. Scambos and C. Raymond. GPR and RES records of disturbed internal layers on Ridge BC, 8th Annual WAIS workshop, 2001.

G. Catania and C. Paola, A physical model of subglacial braided channels, AGU Chapman Conference on the West Antarctic Ice Sheet, 1998, Orono Maine.

CURRENT FUNDING

\$4.9M as lead PI (\$2.2M to UT); \$3.5M as co-PI (\$3.3M to UT)

National Aeronautics and Space Administration, Cryosphere (IceBridge) 2015-2017

Accumulation and flow of the Greenland Ice Sheet during the late Holocene

PI: Joe MacGregor; co-PIs: Ginny Catania, Mark Fahnestock (UAF), John Paden (U. Kansas)

Total award: \$354,428

National Aeronautics and Space Administration, Earth Science (IDS)/Cryosphere 2012-2015

Physical controls on ocean-terminating glacier variability in Central West Greenland

PI: Ginny Catania; co-PIs: Leigh Stearns (U. Kansas), David Sutherland (U. Oregon), Emily Shroyer (Oregon State), Jonathan Nash (Oregon State), Ryan Walker (Penn. State)

Total award: \$1,524,256; UT portion: \$335,026; additional logistics: \$402,154

National Aeronautics and Space Administration, IceBridge 2012-2015

A synthetic approach to mapping the thermal state of the Greenland Ice Sheet using radio-stratigraphy and satellite remote sensing

PI: Ginny Catania; co-PIs: Joe MacGregor (UT), Mark Fahnestock (UAF)

Total award: \$460,588; UT portion: \$313,451

National Science Foundation, 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: Ginny Catania; co-PIs: Joe MacGregor (UT), Mark Fahnestock (UAF)

Total award: \$418,647; UT portion: \$306,430

STUDENT AND POST-DOC ADVISING

Post-doctoral Fellows

| Name | Supervision Period | Funding Source | Present Postion |
|-------------------------|--------------------|-------------------------|-----------------------|
| Tim Bartholomaus | 01/14-present | UTIG Postdoc Fellowship | N/A |
| Jason Gulley | 01/11-01/13 | NSF Postdoc Fellowship | Assist. Prof., USF |
| Joe MacGregor | 09/10-05/13 | NSF Funding to Catania | Res. Assoc., UTIG |
| Charles Webb | 05/07-05/10 | NASA Funding to Catania | Chief Scientist, NASA |

Doctoral Students

| Name | Status | Date of Supervision | Institution | Role |
|-----------------|---------------|---------------------|---------------|------------------|
| Eric Petersen | pre-candidate | 10/14-present | UT-Geosci. | Committee Member |
| Hongyu Zhu | pre-candidate | 04/14-present | UT-ICES | Committee Member |
| Mason Fried | candidate | 09/13-present | UT-Geosci. | Committee Chair |
| Justin Heister | candidate | 09/13-present | UT-Geosci. | Committee Chair |
| Denis Felikson | candidate | 09/13-present | UT-Aerospace | Co-Chair |
| Toby Issac | graduate | 09/13-05/15 | UT-ICES | Committee Member |
| Elizabeth Logan | candidate | 09/10-present | UT-Geosci. | Committee Chair |
| Lauren Andrews | candidate | 09/09-present | UT-Geosci. | Committee Chair |
| David Rounce | candidate | 09/09-present | UT-Civil Eng. | Committee Member |
| Marcelo Somos | graduate | 09/11-07/14 | UT-Civil Eng. | Committee Member |
| Kelly Hereid | graduate | 06/10-05/12 | UT-Geosci. | Committee Member |
| Jamin Greenbaum | transferred | 01/07-09/08 | UT-Geosci. | Committee Chair |
| Audrey Sawyer | graduate | 06/09-05/11 | UT-Geosci. | Committee Member |
| Robert Harpold | graduate | 09/08-05/10 | UT-Aerospace | Committee Member |

Masters Students

| Name | Status | Date of Supervision | Institution | Role |
|------------------|----------|---------------------|------------------|------------------|
| John Swartz | graduate | 04/13-08/14 | UT-Geosci. | Committee Member |
| Benjamin Wagman | graduate | 09/10-05/12 | UT-Geosci. | Committee Chair |
| Kathleen Negrito | graduate | 06/08-01/09 | UTeach Nat. Sci. | Committee Chair |
| Ryan Elmore | graduate | 12/07-12/08 | UT-Geosci. | Committee Member |
| Julie Rumrill | graduate | 09/06-09/08 | Vermont-Geology | Committee Member |

Undergraduate Students

*indicates honors student

| Name | Status | Date of Supervision | Institution | Role |
|-------------------|----------|---------------------|-------------------|------------------|
| David Comer | Senior | 09/15-present | UT-EVS | Adviser |
| Andrea Jimenez | Junior | 09/14-present | UT-EVS | Adviser |
| Daniel Le* | graduate | 01/11-05/14 | UT-Geosci. Honors | Adviser |
| Alex Mabrey* | graduate | 09/11-05/13 | UT-Geosci. | Adviser |
| Jesse Berney* | graduate | 01/12-05/13 | UT-Geosci. | Committee Member |
| John DeSanto* | graduate | 01/12-05/13 | UT-Geosci. | Committee Member |
| Alan Andrews | graduate | 06/10-01/11 | UT-Geosci. | Adviser |
| Michael Markowski | graduate | 06/10-05/11 | UT-Geosci. | Adviser |

HONORS & AWARDS TO SUPERVISED STUDENTS

- 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 UT-DGS Ronald DeFord Field Scholarship - John Nowinski
- 2012 Devon Energy Corporation Fellowship - Lauren Andrews
- 2010 UT-UTIG Ewing-Worzel Fellowship - Lauren Andrews

TEACHING EXPERIENCE

GEO 371T: Introduction to the Cryosphere

This is a team-taught course (Catania's load is 1/3) 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; enrollment ~15**

GEO 371C: Glaciology (writing and quantitative reasoning flags)

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; enrollment ~20**

UGS 303: Signature Course: Geology in the Public Media (writing flag)

This course serves as an introductory course in Geology to undergrads as part of the Signature Course series required by UT. In the course, basic knowledge of "how the Earth works" is taught with the aid of news articles regarding modern controversial topics related to Earth science. This course provides students with a general background in Earth science as well as the communication tools to debate complex Earth science controversies with confidence. While not a required course for the Geology degree major, this course serves as a tool for interesting undeclared students in Earth science. **Taught F2010, F2012; S2013; enrollment ~90**

GEO 346C: Intro. to Physical and Chemical Hydrogeology (quantitative reasoning flag)

This course serves as an introduction to hydrogeology. It is a core course for the Environmental Science degree program, but also serves Geology and other majors as an elective. Course material covers basic surface and groundwater hydrology with a focus on Texas water resources. I have revised the course problem sets to be more quantitative and data-driven allowing students to examine real hydrology data (time-series and GIS data), which allow them to understand the types of assumptions that go into performing basic interpretations, i.e. how science is done. **Taught S2012; enrollment ~50**

PROFESSIONAL SERVICE**Internal Service (UT-Austin)**

| | |
|---|---------------|
| JSG Dean Review Committee , Jackson School of Geosciences | 03/15 - 05/15 |
| Strategic Planning Committee , Dept. of Geosciences | 01/14 - 09/15 |
| Hydrology and Glaciology Discipline Leader , Dept. of Geosciences | 01/13 - 10/14 |
| Annual Performance Evaluation Committee , Institute for Geophysics | 01/13 - 01/14 |
| Undergraduate Education Committee , Dept. of Geosciences | 09/09 - 01/14 |
| Postdoctoral Fellowship Committee , Institute for Geophysics | 09/09 - 01/14 |
| Undergraduate Faculty Mentor , Dept. of Geoscience | 01/13 - 05/13 |
| Seminar Series Committee , Institute for Geophysics | 09/10 - 05/13 |
| Associate Dean Search Committee , Dept. of Geosciences | 09/12 - 09/12 |
| GSC Membership Ad-Hoc Committee , Jackson School of Geosciences | 02/12 - 04/12 |
| Climate Scientist Search Committee , Jackson School of Geosciences | 09/07 - 06/08 |
| UTIG Director Search Committee , Institute for Geophysics | 09/08 - 05/09 |
| Hydrogeology Search Committee , Dept. of Geosciences | 12/10 - 04/11 |
| Oceanography Search Committee , Institute for Geophysics | 12/10 - 05/11 |

External Service: Referee

Journals: Nature, Nature Geosciences, Geophysical Research Letters, Journal of Geophysical Research, Geology, Journal of Glaciology, Journal of Hydrology, Earth and Planetary Science Letters, The Cryosphere, Annals of Glaciology, Journal of Environmental & Engineering Geophys., Quaternary Research, 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 Measures, NASA IPY, NSF OPP Post-doc Fellowships, NSF Arctic Natural Sciences Committee of Visitors.

External Service: Other

| | |
|--|---------------|
| APECS Early Career Panel Member AGU Fall Meeting | 12/12 |
| CLIVAR Greenland Ice Sheet working group member | 11/10 - 05/13 |
| Associate Editor for Journal of Glaciology | 07/12 - 05/13 |
| Glaciology representative for the McMurdo Area Users Committee | 03/08-05/11 |

FIELD ACTIVITIES

| Dates | Project | Location | Role |
|---------------|--|------------------|--------------------|
| 06/93 - 08/93 | Alpine Glacier Hydrology | Switzerland | Research Assistant |
| 06/94 - 08/94 | Alpine Glacier Hydrology | British Columbia | Research Assistant |
| 11/96 - 02/97 | Ice Stream Dynamics | West Antarctica | Research Assistant |
| 11/98 - 02/99 | Ice Stream Dynamics | West Antarctica | Research Assistant |
| 11/01 - 01/02 | Ice Stream History | West Antarctica | Research Assistant |
| 11/02 - 01/03 | Ice Stream History | West Antarctica | Research Assistant |
| 11/03 - 02/04 | Ice Stream History and WAIS Core Selection | West Antarctica | Research Assistant |
| 11/04 - 01/05 | Ice Stream Basal Hydrology | West Antarctica | Research Assistant |
| 11/06 - 12/06 | Grounding Line History | West Antarctica | Chief Scientist |
| 05/07 - 07/07 | Ice Sheet Hydrology | Greenland | Co-Chief Scientist |
| 11/07 - 12/07 | Grounding Line History | West Antarctica | Chief Scientist |
| 05/08 - 07/08 | Ice Sheet Hydrology | Greenland | Co-Chief Scientist |
| 09/08 - 09/08 | Ice Sheet Hydrology | Greenland | Co-Chief Scientist |
| 06/10 - 06/10 | Ice Sheet Hydrology/Dynamics | Greenland | Chief Scientist |
| 04/11 - 05/11 | Ice Sheet Hydrology/Dynamics | Greenland | Chief Scientist |
| 06/11 - 08/11 | Ice Sheet Hydrology/Dynamics | Greenland | Chief Scientist |
| 09/11 - 09/11 | Ice Sheet Hydrology/Dynamics | Greenland | Chief Scientist |
| 04/12 - 05/12 | Ice Sheet Hydrology/Dynamics | Greenland | Chief Scientist |
| 06/12 - 07/12 | Ice Sheet Hydrology/Dynamics | Greenland | Chief Scientist |
| 09/12 - 09/12 | Ice Sheet Hydrology/Dynamics | Greenland | Co-Chief Scientist |
| 06/13 - 08/13 | Ice Sheet-Ocean Interactions | Greenland | Co-Chief Scientist |
| 06/14 - 07/14 | Ice Sheet-Ocean Interactions | Greenland | Co-Chief Scientist |
| 09/15 - 10/15 | Ice Sheet-Ocean Interactions | Greenland | Co-Chief Scientist |

OUTREACH ACTIVITIES

| | |
|--|-------|
| 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 |

PROFESSIONAL MEMBERSHIPS

1996-present International Glaciological Society
1999-present American Geophysical Union

COLLABORATORS

S. Anandakrishnan (Penn. State); H. Conway (Univ. of Washington); H. Engelhardt (California Institute of Technology); M. Fahnestock (UAF), J. Gulley (Univ. of S. Florida); R. Hawley (Dartmouth University); M. Hoffman (Los Alamos); C. Hulbe (Portland State University); M. Luethi (ETH); J. Nash (Oregon State); J. MacGregor (Univ. of Texas); D. Mohrig (Univ. of Texas); T. Neumann (NASA); C. Paola (Univ. of Minnesota); S. Price (Los Alamos); C. Raymond (Univ. of Washington); T. Scambos (National Snow and Ice Data Center); R. Schutz (UT Center for Space Research); E. Shroyer (Oregon State); L. Stearns (UKansas); D. Sutherland (UOregon); R. Walker (Penn. State); F. Walter (ETH); C. Webb (NASA); D. Winebrenner (Univ. of Washington)