

Byron R. Parizek

Professor of Mathematics and Geosciences

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Executive Summary

Professional Preparation

Pennsylvania State University, Geosciences	2000-2003	Ph.D.
Pennsylvania State University, Geosciences	1995-2000	M.S.
Pennsylvania State University, Physics, Minor in Mathematics	1990-1995	B.S.

Appointments

Su 2018-	Prof. of Mathematics and Geosciences, Penn State DuBois
Sp 2014-	Member of Department of Geosciences Graduate Faculty, Penn State University Park
Su 2013-Su 2018	Associate Prof. of Mathematics and Geosciences, Penn State DuBois
Fa 2007-Su 2013	Assistant Prof. of Mathematics and Geosciences, Penn State DuBois
Fa 2006-Su 2007	Assistant Professor of Physics, The College of New Jersey
2004-2006; Su 2007	Research Associate, Pennsylvania State University (<i>G. Comer Foundation Post-Doctoral Fellow</i> , Sponsor: R.B. Alley)
Su 2004	Instructor, Gaia— The Earth System, Penn State University
2001-2003	<i>NASA/GSFC GSRP Fellow</i> (NASA Advisor: R.A. Bindshadler)
2002-2003	<i>Muan/ Wilson Fellow</i> in the College of Earth and Mineral Sciences
1997; Fa 1998-Su 2001; Fa 2003	Research Assistant, Penn State University
1998-1999	Antarctic Field Season Participant, Siple Dome Ice Core Project
Sp 1997; Fa 1997; Sp 1999	Visiting Scholar, University of Chicago, Ice-sheet and ice-shelf modeling research (Host: D.R. MacAyeal)
Fall 1995; Spring 1996	Teaching Assistant, Penn State University
1986-1995; 1998-2003	Hydrogeological Field Assistant, Richard R. Parizek and Assoc.

Teaching Experience

Professor (Assistant, Associate, and/or full)

CMPSC 200, Programming for Engineers with MATLAB
GEOG 412W, Climate Change and Variability
GEO 220, Advanced Geology (TCNJ)
GEOSC 001, Physical Geology
GEOSC 10, Geology of National Parks
GEOSC 452, Hydrogeology
GEOSC 483, Environmental Geophysics
GEOSC 496, Independent Studies, Exploring Geophysical Methods: Seismic Reflection, Numerical Techniques, and Hydrogeology
GEOSC 496, Independent Studies, Numerical Modeling of Physical Processes
GEOSC 561, Mathematical Modeling in the Geosciences
GEOSC 597, Special Topics: Glacial Isostatic Adjustment Seminar
GEOSC 597, Ice and Climate
GEOSC 597, Special Topics: Glaciology Reading Seminar
GEOSC 600, Thesis Research
GEOSC 897A, Climate Change
MATH 141, Calculus with Analytic Geometry II

MATH 26, Plane Trigonometry

MET/PHY 171, Meteorology (TCNJ)

METEO 003, Introduction to Meteorology

PHYS 211, General Physics: Mechanics

SCI 103, Physical, Earth, and Space Sciences (TCNJ)

Served on numerous M.S. and Ph.D. committees in Departments of Geosciences and Geography;

Co-Advisor to 5 Graduate students (2 MS, 3 PhD)

Academic Advisor to between 3-26 Undergraduate students/year

Research Advisor to 9 Undergraduate students

Instructor of record, guest lecturer, or Teaching Assistant

Geomorphology (Sp 2008; Fa 2008); Intro to Hydrogeology (Fa 2001–2002; 2004; Sp 2008);

Environment Earth (Fa 2004–2005); Geology of Climate Change (Sp 2006); Geology of Natl. Parks

(2000; 2002–2003; 2005); Glacial and Pleistocene Geology (Sp 2002; 2005); Gaia-The Earth System (Su

2004); Physical Processes in Geology (Fa 2000); Planet Earth (Fa 1995) Lab Coord. of 7 TAs for Planet

Earth (Sp 1996)

- Nominee for 2012 and 2013 Schreyer Teaching Awards (less than 1 percent of the faculty at the Pennsylvania State University receive consideration for these awards and only 6 are chosen annually to receive them)
- Recipient of 2010-2011 and 2019-2020 Delta Mu Sigma Honor Society's Susanne Waitkus Faculty Award for Academic Excellence

Research

- Inaugural recipient of the University College Faculty Scholar Award at Penn State (2017)
- Contributed to the scientific understanding of ice flow and ice-ocean-atmosphere-solid Earth interactions through the advancement and benchmarking of numerical models that I helped build for targeted process-oriented studies
- Continuous funding through NSF, NASA, Heising-Simons Foundation, Muan/Wilson Fellowship, and G. Comer Foundation from 1997-Present
- Lead PI/Project Director (4), Co-PI (2), or Co-I (6) on twelve NSF, NASA, and Heising-Simons Foundation grants from 2005-Present totaling \$7,124,601
- Forty-seven peer-reviewed publications, one in press, two in review, and one in progress; 1746 citations in ISI with an H-Index of 21
- One hundred eighty co-authored presentations at technical and professional meetings and colloquia (>100 of which involve Undergraduate Researchers, mentored Graduate Students, Post-doctoral Students, and/or Research Associates)
- Twenty-seven invited presentations
- Invited participant to The Second Indo-American Frontiers of Science Symposium. National Academy of Sciences' Arnold and Mabel Beckman Center in Irvine, California, January, 2007. (Sponsored by the Indo-U.S. Science and Technology Forum in partnership with the U.S. National Academy of Sciences. This is the Academy's premiere activity for distinguished young scientists.)

Service

- Invited by Madlyn Hanes, Vice President for the Commonwealth Campuses to serve as Chair for DuBois Chancellor/CAO Search Committee, Nominated/Invited to Instructional Planning Committees (Modified TEAM G and Graduate Education Subcommittee), Invited by EMS Dean Lee Kump to represent the DuBois campus on the Stewarding Our Planet's Resources Steering Committee, Invited Participant in EMS Faculty and Staff Workload Burden Workshop, Invited Member of UC Task Force on Workload Guidelines, Member of Penn State DuBois HDFS

Assistant Professor Search Committee, Point of Contact for British Antarctic Survey airborne flight map for the NSF-NERC funded GHOST project, Invited consultant, Climate and Environmental Change UG Certificate; Departments of Geography, Geosciences, and Meteorology in the College of EMS, Member, Physics Associate Teaching Professor Search Committee, Invited Chairperson, Adjunct Instructor of Geosciences Search Committee, Invited reviewer for multiple College of Earth and Mineral Sciences proposed courses, Chair and Committee Member, University College Scholarship Award Review Committee, Invited Commencement Steering Committee, Strategic Planning Group, Academic Affairs Funding Committee, Faculty Affairs Committee, Mathematics, Earth Science, and Engineering Search Committees, Faculty Representative for Glendale Property, Colloquium Committee, Beautification Committee (Member and Chair), Cultural Diversity Team, Faculty Congress, Head Judge of Faculty/Student Symposium, Academic Success Panel, Earth Program Assessment and Webpage Development, co-Chairperson Alumni Fellow Campus Visit, co-Master of Ceremony for Chancellor McDonald's retirement party, and Faculty Marshal at Penn State DuBois, Head of the Earth Program, University College Faculty Council (Councilor and Secretary; Research Award Subcommittee), Campus Promotion and Tenure Committee (Member and Chair), University College Promotion and Tenure Committee, reviewer for new courses, Campus Alternate Ombudsperson, College of Earth and Mineral Sciences Advising contact, Campus Chancellor and Chief Academic Officer Search Committee, Chair of Instructor of Administration of Justice search for Penn State DuBois and Greater Allegheny, Chair of Search Committee for DS adjunct, Judge for Department of Geosciences Graduate Student Poster Session

- Member of numerous M.S. and Ph.D. committees, co-Advisor for two M.S. students and three Ph.D. students, and annually recruit prospective graduate students for the Department of Geosciences at the University Park campus of Penn State
- Referee for up to 8 journal articles per year (named as a Top Reviewer for Elsevier journals 2009; 2011 letter of recognition along with a year's free subscription from Nature for exceptional service in 2010) and NSF, NASA, NERC, Marsden Fund, or German Research Foundation proposals each year; served on multiple panels for government agencies (NSF, NASA and DOE)
- Contributor to NASA's Operation Ice Bridge Mission's 2011-2013 Greenland and/or Antarctica flight planning
- Contributing member of the Ice Modeling Assessment Group for the Next Generation Ice Sheet Modeling effort. This group was officially renamed Sea-level Response to Ice Sheet Evolution (SeaRISE).
- Invited participant, session leader, and/or presenter at eight international workshops (held at GFDL, UTIG, LANL, NASA GSFC (twice), and NYUAD (three times)) on the dynamics of the cryosphere
- Teaching demonstrations for elementary school students, middle school teachers, and high school academic advisors; Held a nearly hour-long question and answer period following a public screening of Chasing Ice; Participated in Webinar with Chasing Ice nature photographer, James Balog, to help determine scientific utility of his Extreme Ice Survey image archive

Record of Membership in Professional and Learned Societies

Geological Society of America, 2004–Present

International Glaciological Society, 2002–Present

American Geophysical Union, 1997, 2000–Present

Phi Beta Kappa Honors Society, Inducted 1995

Golden Key National Honors Society, Inducted 1995

Articles in Refereed Journals (Times Cited as of January 29, 2023)

Melton, S.M. (*PhD Advisee*), R.B. Alley, S. Anandakrishnan, **B.R. Parizek**, M.G. Shahin, L.A. Stearns, A.L. LeWinter, and D.C. Finnegan. Meltwater drainage and iceberg calving observed in high-spatiotemporal resolution at Helheim Glacier, Greenland. *Journal of Glaciology*, 68, 270, 16 pp, <https://doi.org/10.1017/jog.2021.141>, 2022. (Impact Factor: 4.02, Q1 Quartile in Category; Times Cited: 4)

Alley, R.B., N.D. Holschuh, D.R., MacAyeal, **B.R. Parizek**, L. Zoet, K.L. Riverman, A. Muto, K. Christianson, E. Clyne, S. Anandakrishnan, N. Stevens (*Post-Doctoral Scholar*), and GHOST Collaboration. Bedforms of Thwaites Glacier, West Antarctica: Character and Origin. *Journal of Geophysical Research—Earth Surface*, 126. DOI: 10.1029/2021JF006339, 2021. (Impact Factor: 4.20, Q1 Quartile in Category; Times Cited: 3)

Vaňková, I. (*Post-Doctoral Scholar*), K.W. Nicholls, S. Xie, **B.R. Parizek**, D. Voytenko, and D.M. Holland, Depth-dependent artifacts resulting from ApRES signal clipping. *Annals of Glaciology* 61(81), 108-113, <https://doi.org/10.1017/aog.2020.56>, 2020. (Impact Factor: 2.70, Q1 Quartile in Category; Times Cited: 2)

Muto, A, R.B. Alley, **B.R. Parizek**, and S. Anandakrishnan. Bed-type variability and till (dis)continuity beneath Thwaites Glacier, West Antarctica. *Annals of Glaciology* 1–9. <https://doi.org/10.1017/aog.2019.32>, 2019. (Impact Factor: 2.70, Q1 Quartile in Category; Times Cited: 7)

Riverman, K.L., S. Anandakrishnan, R.B. Alley, N. Holschuh, C.F. Dow, A. Muto, **B.R. Parizek**, K. Christianson, L.E. Peters. Wet subglacial bedforms of the NE Greenland Ice Stream shear margins. *Annals of Glaciology* 1–9. <https://doi.org/10.1017/aog.2019.43>, 2019. (Impact Factor: 2.70, Q1 Quartile in Category; Times Cited: 9)

Alley, R.B., W. Li (*Masters Candidate*), **B.R. Parizek**, and F. Zhang. Evaluation of ice-stream model sensitivities for parameter estimation. *Earth and Planetary Science Letters* 516, 49-55, <https://doi.org/10.1016/j.epsl.2019.03.035>, 2019. (Impact Factor: 5.32, Q1 Quartile in Category; Times Cited: 1)

Parizek, B.R., K. Christianson, R.B. Alley, D. Voytenko (*Ph.D. Candidate*), I. Vaňková (*Served as Reader on NYU Ph.D. Committee*), T.H. Dixon, R.T. Walker, and D.M. Holland, Ice-cliff failure via retrogressive slumping, *Geology*, v. 47, p. 1–4, <https://doi.org/10.1130/G45880.1>, 2019. (Impact Factor: 13.63, Q1 Quartile in Category; Times Cited: 21)

Koellner, S. (*Undergraduate Research Advisee*), **B.R. Parizek**, R.B. Alley, A. Muto, N. Holschuh, The impact of spatially-variable basal properties on outlet glacier flow, *Earth and Planetary Science Letters* 515, 200–208, <https://doi.org/10.1016/j.epsl.2019.03.026>, 2019. (Impact Factor: 5.32, Q1 Quartile in Category; Times Cited: 16)

Alley, R. B., D. Pollard, D., **B.R. Parizek**, S. Anandakrishnan, M. Pourpoint (*Ph.D. Candidate*), N.T. Stevens. (*Ph.D. Candidate*), J.A. MacGregor, K. Christianson, A. Muto and N. Holschuh. Possible role for tectonics in the evolving stability of the Greenland Ice Sheet. *Journal of Geophysical Research: Earth Surface*, 124. <https://doi.org/10.1029/2018JF004714>, 2019. (Impact Factor: 4.20, Q1 Quartile in Category; Times Cited: 7)

Muto, A., S. Anandakrishnan, R.B. Alley, H.J. Horgan, **B.R. Parizek**, S. Koellner (*Undergraduate Research Advisee*), K. Christianson, K., and N. Holschuh. Relating bed

character and subglacial morphology using seismic data from Thwaites Glacier, West Antarctica. *Earth and Planetary Science Letters*, 507, 8. [http:// https://doi.org/10.1016/j.epsl.2018.12.008](http://https://doi.org/10.1016/j.epsl.2018.12.008), 2019. (Impact Factor: 5.32, Q1 Quartile in Category; Times Cited: 27)

Vaňková, I. (*Served as Reader on NYU Ph.D. Committee*), D. Voytenko (*Ph.D. Candidate*), K.W. Nicholls, S. Xie, **B.R. Parizek**, and D.M. Holland. Vertical structure of diurnal englacial hydrology cycle at Helheim Glacier, East Greenland. *Geophysical Research Letters*, 45, 11. ISBN/ISSN #/Case #/DOI #: doi:10.1029/2018GL077869, 2018. (Impact Factor: 5.38, Q1 Quartile in Category; Times Cited: 11)

Lampkin, D. J., **B.R. Parizek**, E.Y. Larour, H. Seroussi, C. Joseph (*Graduate Student*), and J.P. Cavanagh (*Graduate Student*), Toward Improved Understanding of Changes in Greenland Outlet Glacier Shear Margin Dynamics in a Warming Climate. *Front. Earth Sci.*, 6(156). ISBN/ISSN #/Case #/DOI #:10.3389/feart.2018.00156, 2018. (Impact Factor: 3.34, 5-Year Impact Factor: 2.97; Q1 Quartile in Category; Times Cited: 1)

Holschuh, N. (*Served on Ph.D. Committee*), **B.R. Parizek** (*Primary advising and modeling author*), R.B. Alley, S. Anandakrishnan. Decoding ice sheet behavior using englacial layer slopes. *Geophysical Research Letters*, 44, pp. 10, doi:10.1002/2017GL073417, 2017. (Impact Factor: 5.38, Q1 Quartile in Category; Times Cited: 18)

Holland, D.M., D. Voytenko, K. Christianson (*former Ph.D. Candidate*), T.H. Dixon, M.J. Mei, **B.R. Parizek**, I. Vaňková (*Ph.D. Candidate at NYU*), R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), J.I. Walter, K. Nicholls, and D. Holland. An intensive observation of calving at Helheim Glacier, East Greenland. *Oceanography* 29(4):46–61, <https://doi.org/10.5670/oceanog.2016.98>, 2016. (Impact Factor: 3.883, 5-Year Impact Factor: 3.911; Q1 Quartile in Category; Times Cited: 12)

Christianson, K. (*former Ph.D. Candidate*), M. Bushuk (*former Ph.D. Candidate at NYU*), P. Dutrieux, **B.R. Parizek**, I.R. Joughin, R.B. Alley, D.E. Shean, E.P. Abrahamsen, S. Anandakrishnan, K.J. Heywood, T.W. Kim, S.H. Lee, K. Nicholls, T. Stanton, M. Truffer, B.G.M. Webber, A. Jenkins, S. Jacobs, R. Bindenschadler, and D.M. Holland. Sensitivity of Pine Island Glacier to observed ocean forcing, *Geophys. Res. Lett.*, 43, doi:10.1002/2016GL070500, 2016. (Impact Factor: 4.212, 5-Year Impact Factor: 4.52; Q1 Quartile in Category; Times Cited: 56)

Stevens, N. T. (*Masters Advisee*), B. R. Parizek, and R. B. Alley. Enhancement of volcanism and geothermal heat flux by ice-age cycling: A stress modeling study of Greenland, *J. Geophys. Res. Earth Surf.*, 121, 1456–1471, doi:10.1002/2016JF003855, 2016. (Impact Factor: 3.318, 5-year Impact Factor: 3.651; Q1 Quartile in Category; Times Cited: 12)

Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), **B.R. Parizek**, R.B. Alley, and S.M.J. Nowicki. A Viscoelastic Model of Ice Stream Flow with Application to Stick-Slip Motion. *Front. Earth Sci.*, v. 4, Article 2, pp. 11, doi:10.3389/feart.2016.00002, 2016. (Impact Factor: 3.34, 5-Year Impact Factor: 2.97; Q1 Quartile in Category; Times Cited: 6)

Alley, R.B., S. Anandakrishnan, K. Christianson (*former Ph.D. Candidate*), H.J. Horgan, A. Muto (*Post Doctoral Scholar/Research Associate*), **B.R. Parizek**, D. Pollard, and R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*). Oceanic forcing of ice-sheet retreat: West Antarctica and more. *Annu. Rev. Earth Planet. Sci.*, 43: 207–231, doi: 10.1146/annurev-earth-060614-105344, 2015. (Impact Factor: 7.81, 5-Year Impact Factor: 10.622; Q1 Quartile in Category; Times Cited: 73)

Applegate, P.J., **B.R. Parizek**, R.E. Nicholas, R.B. Alley, and K. Keller. Increasing temperature forcing

reduces the Greenland Ice Sheet's response time scale. *Climate Dynamics*, v. 45, 2001-2011, doi:10.1007/s00382-014-2451-7, 2015. (Impact Factor: 4.708, 5-Year Impact Factor: 4.886; Q1 Quartile in Category; Times Cited: 18)

Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), **B.R. Parizek**, R.B. Alley, K.M. Brunt, and S. Anandakrishnan. Ice-shelf flexure and tidal forcing of Bindschadler Ice Stream, West Antarctica. *Earth and Planetary Science Letters*, v. 395, 184-193, doi:10.1016/j.epsl.2014.03.049, 2014. (Impact Factor: 4.326, 5-Year Impact Factor: 4.971; Q1 Quartile in Category; Times Cited: 7)

Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), D.M. Holland, **B.R. Parizek**, R.B. Alley, S.M.J. Nowicki, and A. Jenkins. Efficient flowline simulations of ice shelf-ocean interactions: Sensitivity studies with a fully coupled model. *Journal of Physical Oceanography*, v. 43, 2200-2210, doi:10.1175/JPO-D-13-037.1, 2013. (Impact Factor: 3.026, 5-Year Impact Factor: 3.246; Q1 Quartile in Category; Times Cited: 8)

Christianson K. (*former Ph.D. Candidate*), **B.R. Parizek**, R.B. Alley, H.J. Horgan, R.W. Jacobel, S. Anandakrishnan, B.A. Keisling (*Undergraduate Researcher at St. Olaf*), B.D. Craig (*Undergraduate Researcher at St. Olaf*), and A. Muto (*Post Doctoral Scholar/Research Associate*). Ice sheet grounding zone stabilization due to till compaction. *Geophys. Res. Lett.*, v. 40, 1–6, doi:10.1002/2013GL057447, 2013. (Impact Factor: 4.212, 5-Year Impact Factor: 4.53; Q1 Quartile in Category; Times Cited: 38)

Nowicki, S.M.J., R.A. Bindschadler, A. Abe-Ouchi, A. Aschwanden, E. Bueler, H. Choi, J. Fastook, G. Granzow, R. Greve, G. Gutowski, U. Herzfeld, C. Jackson, J. Johnson, C. Khroulev, E. Larour, A. Levermann, W.H. Lipscomb, M.A. Martin, M. Morlighem, **B.R. Parizek**, D. Pollard, S.F. Price, D. Ren, E. Rignot, F. Saito, T. Sato, H. Seddik, H. Seroussi, K. Takahashi, R. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), and W.L. Wang. Insights into spatial sensitivities of ice mass response to environmental change from the SeaRISE ice sheet modeling project I: Antarctica. *Journal of Geophysical Research-Earth Surface*, v. 118, doi:10.1002/jgrf.20081, 2013. (Impact Factor: 3.318, 5-year Impact Factor: 3.651; Q1 Quartile in Category; Times Cited: 49)

Nowicki, S.M.J., R.A. Bindschadler, A. Abe-Ouchi, A. Aschwanden, E. Bueler, H. Choi, J. Fastook, G. Granzow, R. Greve, G. Gutowski, U. Herzfeld, C. Jackson, J. Johnson, C. Khroulev, E. Larour, A. Levermann, W.H. Lipscomb, M.A. Martin, M. Morlighem, **B.R. Parizek**, D. Pollard, S.F. Price, D. Ren, E. Rignot, F. Saito, T. Sato, H. Seddik, H. Seroussi, K. Takahashi, R. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), and W.L. Wang. Insights into spatial sensitivities of ice mass response to environmental change from the SeaRISE ice sheet modeling project II: Greenland. *Journal of Geophysical Research-Earth Surface*, v. 118, doi:10.1002/jgrf.20076, 2013. (Impact Factor: 3.318, 5-year Impact Factor: 3.651; Q1 Quartile in Category; Times Cited: 64)

Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), **B.R. Parizek**, R.B. Alley, S. Anandakrishnan, K.L. Riverman (*Ph.D. Candidate*), and K. Christianson (*former Ph.D. Candidate*). Ice-shelf tidal flexure and subglacial pressure variations. *Earth and Planetary Science Letters*, v. 361, 422-428, doi:10.1016/j.epsl.2012.11.008, 2013. (Impact Factor: 4.326, 5-Year Impact Factor: 4.971; Q1 Quartile in Category; Times Cited: 62)

Parizek, B.R., K. Christianson (*former Ph.D. Candidate*), S. Anandakrishnan, R.B. Alley, R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), R.A. Edwards (*Undergraduate Research Advisee*), D.S. Wolfe (*Undergraduate Research Advisee*), G.T. Bertini (*Undergraduate Research Advisee*), S.K. Rinehart (*Undergraduate Research Advisee*), R.A. Bindschadler, and S.M.J. Nowicki. Dynamic (in)stability of Thwaites Glacier, West Antarctica. *Journal of Geophysical Research-*

Earth Surface, v. 118, doi:10.1002/jgrf.20044, 2013. (This work has been cited in the IPCC and other high-level reports. Impact Factor: 3.318, 5-year Impact Factor: 3.651; Q1 Quartile in Category; Times Cited: 76)

Lampkin, D.J., N. Amador (*Ph.D. Candidate*), **B.R. Parizek**, K. Farness, and K. Jezek. Drainage from water-filled crevasses along the margins of Jakobshavn Isbrae: A potential catalyst for catchment expansion. *Journal of Geophysical Research-Earth surface*, v. 118, doi:10.1002/jgrf.20039, 2013. (Impact Factor: 3.318, 5-year Impact Factor: 3.651; Q1 Quartile in Category; Times Cited: 16)

Bindschadler, R.A., S.M.J. Nowicki, A. Abe-Ouchi, A. Aschwanden, H. Choi, J. Fastook, G. Granzow, R. Greve, G. Gutowski, U. Herzfeld, C. Jackson, J. Johnson, C. Khroulev, A. Levermann, W.H. Lipscomb, M.A. Martin, M. Morlighem, **B.R. Parizek**, D. Pollard, S.F. Price, D. Ren, F. Saito, T. Sato, H. Seddik, H. Seroussi, K. Takahashi, R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), and W.L. Wang. Ice-sheet model sensitivities to environmental forcing and their use in projecting future sea-level (The SeaRISE Project). *Journal of Glaciology*, 59(214), 195-224, doi:10.3189/2013JoG12J125, 2013. ("Highly Cited Paper"; Impact Factor: 3.109, 5-year Impact Factor: 3.229; Q1 Quartile in Category; Times Cited: 181)

Walker, R.T. (*co-Mentored Post Doctoral Scholar/Research Associate*), K. Christianson (*former Ph.D. Candidate*), **B.R. Parizek**, S. Anandakrishnan, and R.B. Alley. A viscoelastic flowline model applied to tidal forcing of Bindschadler Ice Stream, West Antarctica. *Earth and Planetary Science Letters*, 319-320C, 128-132, doi:10.1016/j.epsl.2011.12.019, 2012. (Impact Factor: 4.326, 5-Year Impact Factor: 4.971; Q1 Quartile in Category; Times Cited: 21)

Parizek, B.R. and R.T. Walker (*co-Mentored Post Doctoral Scholar/Research Associate*). Implications of initial conditions and ice-ocean coupling on groundingline evolution. *Earth and Planetary Science Letters*, v. 300, 351–358, 2010. (Impact Factor: 4.326, 5-Year Impact Factor: 4.971; Q1 Quartile in Category; Times Cited: 11)

Parizek, B.R., Sliding to sea. *Nature Geoscience*, v. 3, no. 6, 385-386, doi:10.1038/ngeo879, 2010. (Invited *News and Views* article in the leading journal in the Geosciences; Impact Factor: 12.508, 5-year Impact Factor: 13.775; Q1 Quartile in Category with top ranking as the premier journal of Geosciences, Multidisciplinary research; Times Cited: 6)

Parizek, B.R., R.B. Alley, T.K. Dupont, R.T. Walker (*co-Mentored Post Doctoral Scholar/Research Associate*), and S. Anandakrishnan. Effect of Orbital-Scale Climate Cycling and Meltwater Drainage on Ice-Sheet Grounding-Line Migration. *Journal of Geophysical Research--Earth Surface*. v. 115, F01011, doi:10.1029/2009JF001325, 2010. (Impact Factor: 3.318, 5-year Impact Factor: 3.651; Q1 Quartile in Category; Times Cited: 17)

Walker, R.T. (*co-Mentored Post Doctoral Scholar*), T.K. Dupont, D.M. Holland, **B.R. Parizek**, and R.B. Alley. Initial effects of oceanic warming on a coupled ocean-ice shelf-ice stream system. *Earth and Planetary Science Letters*, v. 287, no. 3-4, pp. 483-487, 2009. (Impact Factor: 4.326, 5-Year Impact Factor: 4.971; Q1 Quartile in Category; Times Cited: 16)

Alley, R.B., H.J. Horgan (*former Ph.D. Candidate*), I. Joughin, K.M. Cuffey, T.K. Dupont, **B.R. Parizek**, S. Anandakrishnan, and J. Bassis. A simple law for ice-shelf calving. *Science*, v. 322, p. 1344, 2008. (Impact Factor: 34.661, 5-Year Impact Factor: 34.921; Q1 Quartile in Category with second highest ranking as one of the premier journals of original scientific research in Multidisciplinary Sciences; Times Cited: 76)

Walker, R.T. (*co-Mentored Post Doctoral Scholar*), T.K. Dupont, **B.R. Parizek**, and R.B. Alley. Effects

of basal-melting distribution on the retreat of ice-shelf grounding lines. *Geophys. Res. Lett.*, v. 35, L17503, doi:10.1029/2008GL034947, 2008. (Impact Factor: 4.212, 5-Year Impact Factor: 4.52; Q1 Quartile in Category; Times Cited: 44)

Little, C.M., M. Oppenheimer R.B. Alley, V. Balaji, G.K. Clarke, T.L. Delworth, R. Hallberg, D.M. Holland, C.L. Hulbe, S. Jacobs, J.V. Johnson, H. Levy, W.H. Lipscomb, S.J. Marshall, **B.R. Parizek**, A.J. Payne, G.A. Schmidt, R.J. Stouffer, D.G. Vaughan, M. Winton. Toward a New Generation of Ice Sheet Models. *EOS, Transactions, American Geophysical Union*, v. 88, pp. 578 – 579, 2007. (Invited participant in a one-day workshop on ice-sheet modeling at NOAA's Geophysical Fluid Dynamics Laboratory. This manuscript resulted from that workshop.)

Ackert, R.P., Jr., S. Mukhopadhyay, **B.R. Parizek**, and H.W. Borns. Ice elevation near the West Antarctic Ice Sheet divide during the Last Glaciation. *Geophys. Res. Lett.*, v. 34, L21506, doi:10.1029/2007GL031412, 2007. (Selected as a Journal Highlight by the GRL Scientific Editors; Impact Factor: 4.212, 5-Year Impact Factor: 4.52; Q1 Quartile in Category; Times Cited: 40)

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Schwans, E. (*Ph.D. Advisee*), **Parizek, B. R.**, Alley, R. B., Anandakrishnan, S., & Morlighem, M. M. Model Insights into Bed Control on Retreat of Thwaites Glacier, West Antarctica. *Journal of Glaciology*. [Submitted December 13, 2022].

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Parizek, B. R., Schwans, E. (*Ph.D. Advisee*), Alley, R. B., Anandakrishnan, S., Morlighem, M., & ITGC GHOST Team Parsing the Critical Roles of Spatially-Variable Basal Rheology and Topography on the Timing and Magnitude of Outlet Glacier Retreat. *Journal of Glaciology*. [In Progress].

Presentations

- Schwans, Emily (*Ph.D. Advisee*), **Parizek, Byron R.**, Alley, Richard B., Anandakrishnan, Sridhar, Morlighem, Mathieu. Thwaites Glacier's Data-Driven Dynamics, 2022 AGU Fall Meeting, Chicago, IL & Online Everywhere. (December 12, 2022 - December 16, 2022)
- Melton, Sierra M. (*Ph.D. Advisee*), **Parizek, Byron R.**, Alley, Richard B., Anandakrishnan, Sridhar. Enhanced Glacial Thinning and Retreat at an Ice-Cliff Terminus?, 2022 AGU Fall Meeting, Chicago, IL & Online Everywhere. (December 12, 2022 - December 16, 2022)
- Parizek, Byron R.**, Schwans, Emily (*Ph.D. Advisee*), Alley, Richard B., Anandakrishnan, Sridhar, Morlighem, Mathieu, ITGC GHOST Team. Parsing the Critical Roles of Spatially-Variable Basal Rheology and Topography on the Timing and Magnitude of Outlet Glacier Retreat, 2022 AGU Fall Meeting, Chicago, IL & Online Everywhere. (December 12, 2022 - December 16, 2022)
- Givens, Thomas (*Ph.D. Advisee*), La Femina, Peter, **Parizek, Byron R.**, Alley, Richard B., Geirsson, Halldor, Masterlark, Timothy, Schmidt, Peter. Detailed Numerical Modeling of Glacial Isostasy in Iceland, Implications for Mantle Stress Change and Future Volcanic Hazard, 2022 SACNAS -- The National Diversity in STEM Conference, San Juan, Puerto Rico. (October 27, 2022 - October 29, 2022)
- Melton, Sierra (*Ph.D. Advisee*), **Parizek, Byron R.**, Alley, Richard B., Anandakrishnan, Sridhar. Enhanced Glacial Thinning and Retreat at an Ice-Cliff Terminus?, NASA/NSF sponsored West Antarctic Ice Sheet Initiative Annual Meeting, Estes Park, CO. (September 26, 2022 - September 29, 2022)
- Melton, Sierra (*Ph.D. Advisee*), **Parizek, Byron R.**, Alley, Richard B., Anandakrishnan, Sridhar. Enhanced glacial thinning and retreat at an ice-cliff terminus?, Penn State Geosciences Graduate Colloquium, University Park. (April 7, 2022)
- Melton, Sierra M. (*Ph.D. Advisee*), Alley, Richard B., Anandakrishnan, Sridhar, **Parizek, Byron R.**, Shahin, Michael G., Stearns, Leigh A., LeWinter, Adam, Finnegan, David C. Iceberg Calving and Meltwater Drainage Observed in High Spatial and Temporal Resolution at Helheim Glacier, Greenland, 2021 Fall Meeting, New Orleans, LA & Online Everywhere. (December 13, 2021 - December 17, 2021)
- Schwans, Emily (*Ph.D. Advisee*), **Parizek, Byron R.**, Alley, Richard B., Morlighem, Mathieu, St-Laurent, Pierre, ITGC GHOST Team. Bed Control on long-term dynamics for Thwaites Glacier, International Glaciological Society Webinar, Virtual. (August 4, 2021)
- Melton, Sierra (*Ph.D. Advisee*), Alley, Richard B., Anandakrishnan, Sridhar, **Parizek, Byron R.** Iceberg Calving and Meltwater Drainage at the Ice-Cliff Terminus of Helheim Glacier, Greenland, Penn State Geosciences Graduate Colloquium, Virtual. (April 9, 2021)
- Schwans, Emily (*Ph.D. Advisee*), **Parizek, Byron R.**, Alley, Richard B., Anandakrishnan, Sridhar. Modeling Insights into a Rapidly Thinning Outlet Glacier in West Antarctica, Penn State Geosciences Graduate Colloquium, Virtual. (April 9, 2021)
- Melton, Sierra (*Ph.D. Advisee*), Alley, Richard B., Anandakrishnan, Sridhar, **Parizek, Byron R.** Iceberg calving and meltwater drainage at the ice-cliff terminus of Helheim Glacier, Greenland, Graduate Research Exhibition - Physical Sciences & Mathematics, Virtual. (March 24, 2021 - March 26, 2021) Co-advisee, Sierra Melton, won First Place in Physical Sciences and Mathematics in this 36th Annual Graduate Exhibition <https://gradschool.psu.edu/exhibition/awards/>
- Melton, Sierra (*Ph.D. Advisee*), Alley, Richard B., Anandakrishnan, Sridhar, **Parizek, Byron R.** Iceberg Calving and Meltwater Drainage at the Ice-Cliff Terminus of Helheim Glacier, Greenland, EMS Graduate Research Showcase, Virtual. (November 2020)
- Schwans, Emily (*Ph.D. Advisee*), Alley, Richard B., Anandakrishnan, Sridhar, Clyne, Elisabeth, Morlighem, Mathieu, **Parizek, Byron R.**, Seroussi, Helene, St-Laurent, Peirre, Walker, Ryan T. Modeling Insights Into a Rapidly-Retreating Outlet Glacier in West Antarctica (Invited), Georgia Tech Ice & Climate Ice-T Seminar, Virtual. (June 25, 2020)

- Schwans, Emily (*Ph.D. Advisee*), **Parizek, Byron R.**, Alley, Richard B., Anandakrishnan, Sridhar, Clyne, Elisabeth, Muto, Atsuhiko, St-Laurent, Peirre. Dependence of Thwaites' Stability on Bed Character, International Thwaites Glacier Collaboration Annual Meeting, Virtual. (June 17, 2020)
- Alley, Richard B., Anandakrishnan, Sridhar, Muto, Atsuhiko, Clyne, Elisabeth, Holschuh, Nicholas, Christianson, Knut, **Parizek, Byron R.**, Schwans, Emily (*Ph.D. Advisee*), Zoet, Luke, MacAyeal, Douglas R. The bed of Thwaites Glacier—what it says, and why it matters, International Thwaites Glacier Collaboration Annual Meeting, Virtual. (June 17, 2020)
- Alley, Richard, Anandakrishnan, Sridhar, Clyne, Elisabeth, Lee, Ian, Melton, Sierra (*Ph.D. Advisee*), Trusel, Luke, **Parizek, Byron R.**, Schwans, Emily (*Ph.D. Advisee*), Pollard, David. Big ice getting smaller: implications for citizens and scientists, EarthTalks Series: "Societal Problems, EESI Science towards Solutions", Virtual. (April 13, 2020)
- Melton, Sierra (*Ph.D. Advisee*), Alley, Richard B., Anandakrishnan, Sridhar, **Parizek, Byron R.**, Alsaad, N W. Iceberg Calving and Meltwater Plumes at Helheim Glacier, Visualized in High-Resolution Satellite Imagery, Program for Arctic Regional Climate Assessment (PARCA) Meeting, 2020, NASA Goddard Space Flight Center. (February 20, 2020)
- Schwans, Emily (*Ph.D. Advisee*), **Parizek, Byron R.**, Alley, Richard B., Morlighem, Mathieu, St-Laurent, Peirre, Walker, Ryan T., ITGC, The GHOST Team. Role of the Eastern Shear Margin in Thwaites Glacier's Dynamics, 2019 Fall Meeting, San Francisco, CA. (December 9, 2019 - December 13, 2019)
- Alley, Richard B., Alley, Karen E., **Parizek, Byron R.**, Schwans, Emily (*Ph.D. Advisee*), Anandakrishnan, Sridhar. "Then new problems came, from above and below...": Heinrich Events and the future of West Antarctic ice, 2019 Fall Meeting, San Francisco, CA. (December 9, 2019 - December 13, 2019)
- Melton, Sierra M. (*M.S. Advisee*), Alley, Richard B., Anandakrishnan, Sridhar, **Parizek, Byron R.**, Alsaad, Nouf W. Iceberg Calving and Meltwater Plumes at Helheim Glacier, Visualized in High-Resolution Satellite Imagery, 2019 Fall Meeting, San Francisco, CA. (December 9, 2019 - December 13, 2019)
- Muto, Atsuhiko, Alley, Richard B., **Parizek, Byron R.**, Anandakrishnan, Sridhar. Basal-condition variability and till continuity beneath Thwaites Glacier, West Antarctica, International Symposium on Glacier Erosion and Sedimentation, Madison, WI. (May 12, 2019 - May 17, 2019)
- Clyne, Elisabeth (*Served on Ph.D. Committee*), Anandakrishnan, Sridhar, Alley, Richard B., **Parizek, Byron R.**, Muto, Atsuhiko. Processing and interpretation of active seismic data on Thwaites Glacier basal conditions, International Symposium on Glacier Erosion and Sedimentation, Madison, WI. (May 12, 2019 - May 17, 2019)
- Riverman, Kiya L., Anandakrishnan, Sridhar, Alley, Richard B., Christianson, Knut, Holschuh, Nicholas (*Post-Doctoral Scholar*), D., Dow, Christine F., **Parizek, Byron R.**, Peters, Leo E. Wet subglacial landforms of the northeast Greenland Ice Stream shear margins and interior, International Symposium on Glacier Erosion and Sedimentation, Madison, WI. (May 12, 2019 - May 17, 2019)
- Alley, Richard B., **Parizek, Byron R.**, Arthern, Rob, Holschuh, Nicholas (*Post-Doctoral Scholar*), Hoffman, Andrew (*Ph.D. Candidate*), Christianson, Knut, Schwans, Emily (*Ph.D. Advisee*), Melton, Sierra (*M.S. Advisee*), Stevens, Nathan (*Ph.D. Candidate*). GHOST Modelers "Those who do good science even in bad weather", NSF ITGC GHOST Workshop, Vik, Iceland. (May 3, 2019 - May 6, 2019)
- Parizek, Byron R.**, Arthern, Rob, Alley, Richard B., Holschuh, Nicholas (*Post-Doctoral Scholar*), Schwans, Emily (*Ph.D. Advisee*), Hoffman, Andrew (*Ph.D. Candidate*), Melton, Sierra (*M.S. Advisee*), Clyne, Elisabeth R. (*Served on Ph.D. Committee*), Stevens, Nathan (*Ph.D. Candidate*). Modeling: A day in the life..., NSF ITGC GHOST Workshop, Vik, Iceland. (May 3, 2019 - May 6, 2019)
- Alley, Richard B., **Parizek, Byron R.**, Christianson, Knut A., DeConto, Robert M., Pollard, David, Anandakrishnan, Sridhar. Across the Great Divide: The Flow-to-Fracture Transition and the Future of the West Antarctic Ice Sheet, 2018 Fall Meeting, Washington, D.C. (December 10, 2018 - December 14, 2018)

- Schwans, Emily (*Ph.D. Advisee*), **Parizek, Byron R.**, Alley, Richard B., Morlighem, Mathieu, Pollard, David, Walker, Ryan T., LaBirt, Tori (*Undergraduate Research Advisee*), Seroussi, Helene, St-Laurent, Pierre. Ice Sheet System Model (ISSM) studies of controls on stability of Thwaites and Pine Island Glaciers, West Antarctica, 2018 Fall Meeting, Washington, D.C. (December 10, 2018 - December 14, 2018)
- Vaňková, Irena (*Served as Reader and NYU Ph.D. Committee Member*), Voytenko, Denis (*Ph.D. Candidate*), Nicholls, Keith W., Xie, Surui, **Parizek, Byron R.**, Holland, David. Vertical Structure of Diurnal Englacial Hydrology Cycle at Helheim Glacier, East Greenland, 2018 Fall Meeting, Washington, D.C. (December 10, 2018 - December 14, 2018)
- Parizek, Byron R.** (Presenter & Author), Alley, Richard B., Schwans, Emily (*Ph.D. Advisee*), Christianson, Knut A., DeConto, Robert M., Pollard, David, Anandkrishnan, Sridhar, Holland, David M. Ice Cliffs: A Region Primed for Enhanced Flow or Failure?, 2018 Fall Meeting, Washington, D.C. (December 10, 2018 - December 14, 2018)
- Lampkin, Derrick J., Cavanagh, John (*Graduate Student*), Joseph, Casey (*Graduate Student*), **Parizek, Byron R.**, Moon, Twila A., Walker, Ryan T., Larour, Eric Y., Seroussi, Helene L., Flowers, Gwenn E., Banwell, Alison, Jezek, Kenneth C. Shearing in a Warmer Climate: Insights from Observations and Modeling on Hydrologic Perturbations of an Outlet Glacier, 2018 Fall Meeting, Washington, D.C. (December 10, 2018 - December 14, 2018)
- Parizek, Richard R., Parizek, Katarin A., **Parizek, Byron R.** Water Development within small high/exceptional-Quality Watersheds: Not Routine, The Geological Society of America 130th Annual Meeting, Indianapolis, Indiana. (November 4, 2018 - November 7, 2018)
- Alley, Richard B., **Parizek, Byron R.**, Christianson, Knut, DeConto, Robert M., Pollard, David, Anandkrishnan, Sridhar. Across the Great Divide: The Flow-to-Fracture Transition and the Future of the West Antarctic Ice Sheet, NASA/NSF sponsored West Antarctic Ice Sheet Initiative Annual Meeting, Stony Point, New York. (September 17, 2018 - September 19, 2018)
- Schwans, Emily (*Masters Advisee*), **Parizek, Byron R.**, Alley, Richard B., Pollard, David, Morlighem, Mathieu, Seroussi, Helene, St-Laurent, Pierre. Bed Character of Thwaites Glacier: Implications for Stability, NASA/NSF sponsored West Antarctic Ice Sheet Initiative Annual Meeting, Stony Point, New York. (September 17, 2018 - September 19, 2018)
- DeConto, Robert M., Pollard, David, Christianson, Knut, Alley, Richard B., **Parizek, Byron R.** Climatic Thresholds for WAIS Retreat: Onset of Widespread Ice Shelf Hydrofracturing and Ice Cliff Calving in a Warming World, NASA/NSF sponsored West Antarctic Ice Sheet Initiative Annual Meeting, Stony Point, NY. (September 17, 2018 - September 19, 2018)
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- Muto, Atsuhiko, Anandkrishnan, Sridhar, Alley, Richard B., Christianson, Knut, Holschuh, Nicholas (*Post-Doctoral Scholar*), Horgan, Huw J., **Parizek, Byron R.**, Koellner, Stephen J. (*Undergraduate Research Advisee*) Seismic evidence of variable bed conditions beneath Thwaites Glacier, West Antarctica, NASA/NSF sponsored West Antarctic Ice Sheet Initiative Annual Meeting, Stony Point, New York. (September 17, 2018 - September 19, 2018)
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- Alley, Richard B., Li, Wenjie (*Served on M.S. Committee*), **Parizek, Byron R.**, Zhang, Fuqing. Evaluation of ice stream model uncertainties and implications for parameter inversions, International Symposium on Timescales, Processes and Glacier Dynamics, Buffalo, N.Y. (June 2018)

- Muto, Atsuhiko, Anandakrishnan, Sridhar, Alley, Richard B., **Parizek, Byron R.**, Koellner, Stephen J. (*Undergraduate Research Advisee*), Christianson, Knut, Holschuh, Nicholas (*Post-Doctoral Scholar*). Influence of variable basal conditions on grounding-line retreat, International Symposium on Timescales, Processes and Glacier Dynamics, Buffalo, N.Y. (June 2018)
- Alley, Richard B., **Parizek, Byron R.**, Anandakrishnan, Sridhar, Pollard, David, Stevens, Nathan T. (*Ph.D. Candidate*), Pourpoint, Maeva (*Served on Ph.D. Committee*). Possible contribution of ice-sheet/lithosphere interactions to past glaciological changes in Greenland, International Symposium on Timescales, Processes and Glacier Dynamics, Buffalo, N.Y. (June 2018)
- Koellner, Stephen J. (*Undergraduate Research Advisee*), **Parizek, Byron R.** (Presenter & Author), Alley, Richard B., Muto, Atsuhiko, Holschuh, Nicholas (*Post-Doctoral Scholar*), Nowicki, Sophie M.J., Anandakrishnan, Sridhar, Christianson, Knut. Influence of variable basal conditions on grounding-line retreat, International Symposium on Timescales, Processes and Glacier Dynamics, Buffalo, N.Y. (June 2018)
- Koellner, S.J. (*Undergraduate Research Advisee*), **B.R. Parizek** (Presenter & Author), Alley, Richard B., Muto, Atsuhiko, Holschuh, Nicholas (*Post-Doctoral Scholar*), Nowicki, Sophie M.J. (Invited participant, writer) More Data Please: The Significant Impact of Basal Conditions on Grounding-Line Retreat, Rising Coastal Seas on a Warming Earth III, NYU Abu Dhabi. (May 2018)
- Parizek, B.R.** (Presenter & Author). (Invited) A few words from a grateful alum who is having fun in the Geosciences..., 50th Annual Graduate Student Colloquium, University Park. (March 23, 2018)
- Alley, R.B., **B.R. Parizek**, S. Anandakrishnan (*Invited*), Ice dynamics of Heinrich events: Insights and implications, Abstract [PP21E-08] presented at 2017 Fall Meeting, AGU, New Orleans, LA, (11-15 Dec., 2017)
- Alley, R.B., **B.R. Parizek**, S. Anandakrishnan, D. Pollard, N.T. Stevens (*former M.S. Advisee*), and Maeva Pourpoint (*Served on Ph.D. Committee*). Possible contribution of ice-sheet/lithosphere interactions to past glaciological changes in Greenland, Abstract [PP13E-02] presented at 2017 Fall Meeting, AGU, New Orleans, LA, (11-15 Dec., 2017)
- Koellner S.J. (*Undergraduate Research Advisee*), **B.R. Parizek**, R.B. Alley, A. Muto, N. Holschuh (*formerly served on Ph.D. Committee*), and S. Nowicki., Impact of Basal Conditions on Grounding-Line Retreat, Abstract [C41A-1172] presented at 2017 Fall Meeting, AGU, New Orleans, LA, (11-15 Dec., 2017)
- Parizek, B.R.**, K.A. Christianson, R.B. Alley, D. Voytenko (*Ph.D. Candidate*), I. Vaňková (*Ph.D. Candidate*), T.H. Dixon, R.T. Walker, and D. Holland, Update on Simulating Ice-Cliff Failure, Abstract [C41C-1227] presented at 2017 Fall Meeting, AGU, New Orleans, LA, (11-15 Dec., 2017)
- Schwans, E. (*Masters Advisee*), **B.R. Parizek**, M. Morlighem, R.B. Alley, D. Pollard, R.T. Walker, P. Lin, P. St-Laurent, T. LaBirt (*Undergraduate Research Advisee*), and H.L. Seroussi, Simulating Ice Dynamics in the Amundsen Sea Sector, Abstract [C41C-1229] presented at 2017 Fall Meeting, AGU, New Orleans, LA, (11-15 Dec., 2017)
- Anandakrishnan, S., R.B. Alley, K. Christianson (*formerly supported Ph.D.*), N. Holschuh (*Served on Ph.D. Committee*), S.J. Koellner (*Undergraduate Research Advisee*), A. Muto, **B.R. Parizek**, L.E. Peters, D. Pollard (alphabetically; presented by Anandakrishnan), Subglacial controls on the stability of Thwaites Glacier: 1. Geophysical data, NASA/NSF sponsored West Antarctic Ice Sheet Initiative Annual Meeting, Coupeville, WA, peer-reviewed/refereed, published in proceedings, Accepted. International. (October 9-11, 2017)
- Alley, R.B., S. Anandakrishnan, K. Christianson (*formerly supported Ph.D.*), N. Holschuh (*Served on Ph.D. Committee*), S.J. Koellner (*Undergraduate Research Advisee*), A. Muto, S.M.J. Nowicki, **B.R. Parizek**, L.E. Peters, D. Pollard (alphabetically; presented by Alley), Subglacial controls on the stability of Thwaites Glacier: 2. Physical understanding and modeling, NASA/NSF sponsored West Antarctic Ice Sheet Initiative Annual Meeting, Coupeville, WA, peer-reviewed/refereed, published in proceedings, Accepted. International. (October 9-11, 2017)
- Riverman, K. (*Served on Ph.D. Committee*), R. Alley, S. Anandakrishnan, K. Christianson (*formerly supported Ph.D.*), N. Holschuh (*Served on Ph.D. Committee*), A. Muto, L. Peters, **B. Parizek**,

- Wet subglacial landforms in ice stream shear margins, NASA/NSF sponsored West Antarctic Ice Sheet Initiative Annual Meeting, Coupeville, WA, peer-reviewed/refereed, published in proceedings, Accepted. International. (October 9-11, 2017)
- Vaňková, I. (*Ph.D. Candidate at NYU*), D. Voytenko (*Post Doctoral Scholar at NYU*), K.W. Nicholls, S. Xie, **B.R. Parizek**, D.M. Holland, Direct observations of fast ice dynamics and high strain rates at Helheim Glacier, East Greenland, NASA/NSF sponsored West Antarctic Ice Sheet Initiative Annual Meeting, Coupeville, WA, peer-reviewed/refereed, published in proceedings, Accepted. International. (October 9-11, 2017)
- Alley, R.B., S. Anandakrishnan, **B. Parizek**, D. Pollard, M. Pourpoint (*Served on Ph.D. Committee*), N. Stevens (*former M.S. Advisee*), Greenland Ice Sheet stability and lithospheric interactions, NSF Workshop: How stable is the Greenland Ice Sheet?, University of Buffalo, New York (September 10-12, 2017)
- Alley, R.B., S. Anandakrishnan, **B. Parizek**, D. Pollard, and M. Pourpoint (*Served on Ph.D. Committee*), Greenland ice-sheet influences on volcanism... and vice versa, VOICE meeting, Lamont-Doherty Earth Observatory, Palisades, New York (May 16, 2017)
- Muto, A., Peters, L.E., Anandakrishnan, S., Alley, R., **Parizek, B.R.**, Christianson, K., Holschuh, N. (*Served on Ph.D. Committee*) Upper-crustal structures in Byrd Subglacial Basin, West Antarctica, revealed by ground-based and airborne geophysical data, American Geophysical Union (AGU) 2016 Fall Meeting, San Francisco, CA. (December 2016).
- Parizek, B.R.** (Invited by NSF) What are our gaps in knowledge and how can we accelerate scientific discovery under interagency support?, Requirements for improving coordination of ice sheet observation and modeling-based activities. (December 15, 2016)
- Parizek, B.R.**, Christianson, K., Alley, R., Voytenko, D. (*Ph.D. Candidate*), Vaňková, I. (*Ph.D. Candidate*), Dixon, T., Holland, D. Ice-Cliff Failure via Retrogressive Slumping, American Geophysical Union (AGU) 2016 Fall Meeting, San Francisco, CA. (December 13, 2016)
- Schwans, E. (*M.S. Advisee*), **Parizek, B.R.**, Alley, R., Pollard, D., Walker, R.T., Morlighem, M., Seroussi, H., Larour, E. Towards Decadal Hindcasts of Pine Island and Thwaites Glacier, West Antarctica, American Geophysical Union (AGU) 2016 Fall Meeting, San Francisco, CA. (December 13, 2016)
- Holschuh, N. (*Served on Ph.D. Committee*), **Parizek, B.R.**, Alley, R.B., Anandakrishnan, S.. A framework for Interpreting internal layer slopes as a record of past and present ice-sheet boundary conditions, NASA/NSF sponsored West Antarctic Ice Sheet Initiative Annual Meeting, Sterling, VA. (October 5, 2016)
- Parizek, B.R.**, Christianson, K., Alley, R.B., Voytenko (*Ph.D. Candidate*), D., Vaňková (*Ph.D. Candidate*), I., Dixon, T., Holland, D. Ice-Cliff Failure via Retrogressive Slumping, NASA/NSF sponsored West Antarctic Ice Sheet Initiative Annual Meeting, Sterling, VA. (October 5, 2016)
- Muto, A., Peters, L.E., Anandakrishnan, S., Alley, R.B., **Parizek, B.R.**, Christianson, K., Holschuh, N. (*Served on Ph.D. Committee*) Upper-crustal structures beneath Thwaites Glacier revealed by active-source seismic and aerogravity data, NASA/NSF sponsored West Antarctic Ice Sheet Initiative Annual Meeting, Sterling, VA. (October 5, 2016)
- Parizek, B. R.** Ice-Cliff Failure via Retrogressive Slumping, Penn State Ice and Climate Exploration. (September 28, 2016)
- Christianson, K. (*Post-Doctoral Scholar*), **B. Parizek**, R. Alley, D. Holland, D. Voytenko (*Ph.D. Candidate*), T. Dixon. Ice-cliff failure via slumping, International Symposium on Interactions of Ice Sheets and Glaciers with the Ocean, La Jolla, CA. (July 15, 2016)
- Parizek, B.R.** (Invited participant, writer/rapporteur) Pine Island Glacier dynamics and slumping failure of ice cliffs: On the leading and supportive roles of ocean-temperature variability and speed-breaking/limiting processes, Rising Coastal Seas on a Warming Earth II, NYU Abu Dhabi, United Arab Emirates. (May 16, 2016)
- Holschuh, N. (*Served on Ph.D. Committee*), **B. R. Parizek**, R. B. Alley, and S. Anandakrishnan (2016). Structures, Radars, and Antarctic Adventure. *Seminar Series - Carleton College Department of Geology*. Northfield, MN.

- Parizek, B.R.**, R.B. Alley, S. Anandakrishnan, P. Applegate, K. Christianson, T. Dixon, D.M. Holland, N.D. Holschuh (*Served on Ph.D. Committee*), K. Keller, S.J. Koellner, (*Undergraduate Research Advisee*), D.J. Lampkin, A. Muto, R.E. Nicholas, N.T. Stevens (*M.S. Advisee*), D. Voytenko, and R.T. Walker, (Invited talk), Greenland flow dynamics: (De)coding process understanding, External forcing modulates Pine Island Glacier flow. AGU Fall Meeting. San Francisco, CA. (Dec 2015)
- Christianson, K., M. Bushuk, **B. Parizek**, D. Holland, S. Anandakrishnan, R. Alley, P. Dutrieux, K. Heywood, A. Jenkins, I. Joughin, A. Muto, K. Nicholls, T. Stanton, and B. Webber. External forcing modulates Pine Island Glacier flow. AGU Fall Meeting. San Francisco, CA. (Dec 2015)
- Holschuh, N. (*Served on Ph.D. Committee*), **B. R. Parizek**, R. B. Alley, and S. Anandakrishnan (2015). Englacial Structures as Indicators of the Controls on Ice Flow. AGU Fall Meeting. San Francisco, CA. Outstanding Student Paper Award - AGU Fall Meeting (2015)
- Muto, A., L. Peters, K. Christianson, R. Alley, and **B. Parizek**, Upper-Crustal Structures Beneath Thwaites Glacier, West Antarctica and their Influence on Ice Dynamics, C11A-0736, AGU Fall Meeting. San Francisco, CA. (Dec 2015)
- Stevens, N.T. (*M.S. Advisee*), **B.R. Parizek**, and R.B. Alley, Ice-Sheet Enhancement of Volcanism and Geothermal Heat Flux: A Stress Modeling Approach, AGU Fall Meeting. San Francisco, CA. (Dec 2015)
- Holschuh, N. (*Served on Ph.D. Committee*), **B. Parizek**, R. Alley, and S. Anandakrishnan (2015). Internal Reflector Slope Fields as a Proxy for Ice Sheet Velocity Structure. WAIS Workshop. Loveland, CO.
- Christianson, K., M. Bushuk, **B. Parizek**, D. Holland, S. Anandakrishnan, R. Alley, P. Dutrieux, K. Heywood, A. Jenkins, I. Joughin, A. Muto, K. Nicholls, T. Stanton, and B. Webber. (invited talk). External forcing modulates Pine Island Glacier Flow. WAIS Workshop. Loveland, CO (9/16-9/19).
- Muto, A., Peters, L. E., Anandakrishnan, S., Christianson, K., Alley, R. B., and **Parizek, B. R.**, Riverman, K. L. (*Served on Ph.D. Committee*), Sasgen, I., and Gohl, K. (invited talk; 2015), Upper-crustal structures and their influence on ice dynamics in the Amundsen Sea Embayment, 22nd Annual West Antarctic Ice Sheet Workshop, Loveland, CO, 17-19 September;
- Christianson, K., D. Holland, P. Dutrieux, I. Joughin, M. Bushuk, **B. Parizek**, S. Anandakrishnan, R. Alley, A. Jenkins, K. Heywood, K. Nicholls, P. Abrahamsen, T. Stanton, and A. Muto. External forcing modulates Pine Island Glacier flow. International Glaciology Society, International Symposium on Contemporary Ice-Sheet Dynamics: ocean interaction, meltwater and non-linear effects, Cambridge, UK., Aug 16-21
- Holschuh, N. (*Served on Ph.D. Committee*), **B. Parizek**, R. Alley, and S. Anandakrishnan (2015). Discriminating between Steady-State and Transient Controls on Englacial Structures. International Symposium on Contemporary Ice-Sheet Dynamics: ocean interaction, meltwater, and non-linear effects. International Glaciology Society, International Symposium on Contemporary Ice-Sheet Dynamics: ocean interaction, meltwater and non-linear effects, Cambridge, UK., Aug 16-21, (8/20)
- Christianson, K., D. Holland, P. Dutrieux, I. Joughin, M. Bushuk, A. Muto, **B. Parizek**, R. Alley, T. Stanton, and S. Anandakrishnan, Pine Island Glacier response to external forcing, New England Glaciology Meeting, Woods Hole, MA, April 2015.
- Holschuh, N. (*Served on Ph.D. Committee*), **B. R. Parizek**, R. B. Alley, and S. Anandakrishnan (2015). Using the Englacial Geometry of West Antarctica to Determine its Future Stability. Penn State Graduate School Exhibition.
- Holschuh, N. (*Served on Ph.D. Committee*), **B. R. Parizek**, R. B. Alley, and S. Anandakrishnan (2015). Using the Englacial Geometry of West Antarctica to Determine its Future Stability. Penn State Geosciences - Graduate Student Colloquium. 2015 2nd Place Presentation - Penn State Geosciences Colloquium
- Holschuh, N. (*Served on Ph.D. Committee*), **B. Parizek**, S. Anandakrishnan, and R. Alley (2015). Using the Englacial Geometry of West Antarctica to Determine its Future Stability. Advances in Polar Research since the International Polar Year. University Park, PA.

- Stephens, N.T. (*Masters Advisee*), **B.R. Parizek**, and R.B. Alley. 2015. Probing ice sheet enhanced geothermal heat flux processes: A stress modeling approach. The Penn State Polar Center: Advances in Polar Science Since the IPY. University Park, PA. (February 25, 2015).
- Muto, A., L.E. Peters, K.A. Christianson, S. Anandakrishnan, R.B. Alley and **B.R. Parizek**. 2014. Modeling of the Upper Crustal Structure Beneath Thwaites Glacier, West Antarctica with Ground-based and Airborne Geophysical Data, American Geophysical Union (AGU) 2014 Fall Meeting, San Francisco, CA.
- Lampkin, D.J., **B.R. Parizek**, E. Larour, H. Seroussi, and M. Morlighem. 2014. Shear weakening due to drainage from water-filled crevasses along the margins of Jakobshavn Isbrae, American Geophysical Union (AGU) 2014 Fall Meeting, San Francisco, CA.
- Parizek, B.R.**, K.A. Christianson, R.B. Alley, S. Anandakrishnan, T.K. Dupont, D.M. Holland, D. Pollard, and R.T. Walker (2014), The Impact of Empirical Calving Laws on Thwaites Glacier Dynamics, Abstract C23A-0396 presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Parizek, B.R.** (Invited speaker and participant) Helheim Glacier stress fields due to elastic bending and viscous flow and the case for self oscillations, Calving Workshop, New York University. (December 5, 2014).
- Christianson, K., **B.R. Parizek**, H. J. Horgan, D. M. Holland, R. B. Alley, S. Anandakrishnan, R.W. Jacobel, and D. Pollard, The role of grounding-zone process in sea-level rise, IGS Symposium on the Contribution of Glaciers and Ice Sheets to Sea-Level Rise, Chamonix, France, May 2014.
- Christianson, K., H. Horgan, **B. Parizek**, R. Alley, R. Jacobel, S. Anandakrishnan, and D. Pollard, Ice-sheet (de)stabilization via grounding-zone processes, EGU 2014 General Assembly, EGU2014-874, Vienna, Austria, April 2014.
- Parizek, B.R.** (Invited speaker) Simulating ice-sheet dynamics: (De)coding the sea-level-rise bombs, Department of Geosciences Colloquium, University Park, PA. (November 18, 2014).
- Parizek, B.R.** (Invited speaker and participant) Leading controls on future glacier dynamics in West Antarctica, Rising Coastal Seas on a Warming Earth, Abu Dhabi, United Arab Emirates. (October 27, 2014).
- Walker, R.T., Holland, D.M., **Parizek, B.R.**, Alley, R.B., Nowicki, S., and Jenkins, A.. Efficient flowline simulations of ice-shelf/ocean interactions: Sensitivity studies with a fully coupled model, American Geophysical Union (AGU) 2013 Fall Meeting, San Francisco, CA, (December 11, 2013)
- Applegate, P.J., **Parizek, B.R.**, Nicholas, R.E., Keller, K. Dependence of the time scale of the Greenland Ice Sheet's response to imposed temperature change, American Geophysical Union (AGU) 2013 Fall Meeting, San Francisco, CA. (December 13, 2013)
- Stevens, N.T. (*Masters Advisee*), **Parizek, B.R.**, Alley, R.B., Anandakrishnan, S., and D. Pollard, 2013, Ice-Sheet Driven Enhancement of Geothermal Flux: Preliminary Model Results, *AGU Fall Meeting*, San Francisco, CA. Conference Poster C53B-0556.
- Christianson, K. A. (*Supported Ph.D. Candidate*), H. Horgan, **B. R. Parizek**, R. B. Alley, S. Anandakrishnan, R. W. Jacobel, B. A. Keisling, K. L. Dalla Santa, B. Craig, and R. T. Walker, Ice-sheet (de)stabilization via grounding-zone processes, AGU 2013 Fall Meeting, GC34A-07, San Francisco, CA, December 2013, invited presentation.
- Christianson, K.A. (*Supported Ph.D. Candidate*), **B. R. Parizek**, R. B. Alley, H. Horgan, L. E. Peters, B.A. Keisling, R.W. Jacobel, S. Anandakrishnan, K. L. Dalla Santa, and J. E. Christian, In-situ creation of internal layer folds in radio-echo sounding data of ice sheets from variable basal conditions, AGU 2013 Fall Meeting, C33B-0722, San Francisco, CA, December 2013.
- Parizek, B.R.**, Applegate, P.J., Keller, K., and Alley, R.B.. SIA vs Higher Order: Greenland tests, and thoughts on Antarctica, Twentieth Annual WAIS Workshop, Algonkian Meeting Center, Sterling, VA. (October 2, 2013)
- Christianson, K. (*Supported Ph.D. Candidate*), H. J. Horgan, **B.R. Parizek**, R. B. Alley, R. W. Jacobel, and S. Anandakrishnan, Subglacial water and sediment transport across the grounding zone of Whillans Ice Stream, West Antarctica, West Antarctic Ice Sheet Workshop, Sterling, VA,

October 2013.

- Walker, R.T., **Parizek, B.R.**, Alley, R.B., Brunt, K. Ice-shelf flexure and tidal forcing of Bindschadler Ice Stream, Twentieth Annual WAIS Workshop, Algonkian Meeting Center, Sterling, VA. (September 29, 2013)
- Lampkin, D. and **B.R. Parizek**. A Fuel Injected Ice Stream? Melt Water Drainage from Saturated Crevasses into the Jakobshavn Isbræ Shear Margins, International Workshop on Understanding the Response of Greenland's Marine Terminating Glaciers to Oceanic and Atmospheric Forcing: Challenges to improving observations, process understanding and modeling, Beverly, MA. (June 5, 2013)
- Parizek, B.R.**, K. Christianson (*Supported Ph.D. Candidate*), R.B. Alley, H.J. Horgan, R.W. Jacobel, S. Anandakrishnan, B.A. Keisling, and B.D. Craig. Ice sheet grounding zone stabilization due to till compaction. Annual Midwest Glaciology Meeting, University Park, PA, March 7-8, 2013.
- Parizek, B.R.**, (invited) Predicting glacier evolution: Why additional data, process understanding, and application of ISSM-class models are critical, 2012 ISSM Workshop in Irvine, CA, December 11, 2013.
- Jacobel, R.W., K.A. Christianson (*Ph.D. Candidate*), H. Horgan, **B.R. Parizek**, S. Anandakrishnan, R.B. Alley, R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), B. Keisling, L. Snyder, R. Gobel, B. Craig, and K. Dalla-Santa, Grounding Zone Heterogeneity in West Antarctica, *Eos Trans. AGU, Fall Meet. Suppl.*, 2012.
- Parizek, B.R.**, R.B. Alley, S. Anandakrishnan, K. Christianson (*Ph.D. Candidate*), T.K. Dupont, R.A. Edwards (*Undergraduate Research Advisee*), R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), D.S. Wolfe (*Undergraduate Research Advisee*), S.K. Rinehart (*Undergraduate Research Advisee*), K.L. Riverman (*served on Ph.D. Committee*), R.A. Bindschadler, and S.M.J. Nowicki, Predicting glacier evolution: Why additional data is critical, *Eos Trans. AGU, Fall Meet. Suppl.*, 2012.
- Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), **B.R. Parizek**, R.B. Alley, S. Anandakrishnan, K.L. Riverman (*served on Ph.D. Committee*), and K. Christianson (*Ph.D. Candidate*), Ice-shelf tidal flexure and subglacial pressure variations, *Eos Trans. AGU, Fall Meet. Suppl.*, 2012.
- Bindschadler, R.A., S. Nowicki, A. Abe-Ouchi, A. Aschwanden, E. Bueler, H. Choi, J. Fastook, G. Granzow, R. Greve, G. Gutowski, C. Jackson, J. Johnson, A. Levermann, W.H. Lipscomb, M. Martin, M. Morlighem, **B. Parizek**, D. Pollard, S.F. Price, D. Ren, F. Saito, H. Seroussi, K. Takahashi, R. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), W.L. Wang, U. Herzfeld, H. Seddik, and T. Sato. Potential Antarctic contributions to future sea level through the eyes of the SeaRISE Project. *WAIS: The West Antarctic Ice Sheet Initiative*, NASA and NSF sponsored 2012 WAIS Workshop, Nineteenth Annual WAIS Workshop, Pack Forest Conference Center, Eatonville, WA. September 19-22, 2012.
- Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), **B.R. Parizek**, R.B. Alley, S. Anandakrishnan, K.L. Wilson (*served on Ph.D. Committee*), and K. Christianson (*Supported Ph.D. Candidate*). Ice-shelf tidal flexure and subglacial pressure variations. *WAIS: The West Antarctic Ice Sheet Initiative*, NASA and NSF sponsored 2012 WAIS Workshop, Nineteenth Annual WAIS Workshop, Pack Forest Conference Center, Eatonville, WA. September 19-22, 2012.
- Alley, R. B., S. Anandakrishnan, **B. R. Parizek**, R. T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), K. Christianson (*Supported Ph.D. Candidate*), K. L. Wilson (*served on Ph.D. Committee*), and D. Pollard, Grounding-line processes and stability of ice-sheet margins, Scientific Committee on Antarctic Research Open Science Conference, Portland, OR, July 2012, [keynote invited presentation].
- Christianson, K. (*Supported Ph.D. Candidate*), **B. Parizek**, H. Horgan (*former Ph.D. Candidate*), S. Anandakrishnan, R. Alley, R. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), R. Edwards (*Undergraduate Research Advisee*), D. Wolfe (*Undergraduate Research Advisee*), G. Bertini (*Undergraduate Research Advisee*), and S. Reinhart (*Undergraduate*

- Research Advisee*), The Dynamic (In)stability of Thwaites Glacier, West Antarctica, Scientific Committee on Antarctic Research Open Science Conference, Portland, OR, July 2012.
- Edwards, R.A. (*Undergraduate Research Advisee*), **B.R. Parizek**, D. Wolfe (*Undergraduate Research Advisee*), G.T. Bertini (*Undergraduate Research Advisee*), and R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*). Regional Modeling of Thwaites Glacier: Dynamic (In)stability in the Amundsen Sea Embayment, *Fifth Annual Penn State DuBois Student and Faculty Research Symposium*, April 21, 2012.
- Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), K. Christianson (*Ph.D. Candidate*), **B.R. Parizek**, S. Anandkrishnan, and R.B. Alley. A viscoelastic flowline model applied to tidal forcing of Bindschadler Ice Stream, West Antarctica. *Eos Trans. AGU, Fall Meet. Suppl.*, 2011.
- Christianson, K. (*Ph.D. Candidate*), **B.R. Parizek**, S. Anandkrishnan, R.B. Alley, R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), R. Edwards (*Undergraduate Research Advisee*), D.S. Wolfe (*Undergraduate Research Advisee*), and G.T. Bertini (*Undergraduate Research Advisee*). Stability of the Grounding Zone of Thwaites Glacier, West Antarctica, *AGU 2011 Fall Meeting, C31C-08, San Francisco, CA, December 2011*.
- Dupont, T.K., **B.R. Parizek**, D.S. Lindsey (former Ph.D. Candidate at UCI), R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), and R.B. Alley. The influence of lateral variation in basal elevation and resistance on the retreat of streaming ice, *Eos Trans. AGU, Fall Meet. Suppl.*, 2011.
- Edwards, R.A. (*Undergraduate Research Advisee*), **B.R. Parizek**, D. Wolfe (*Undergraduate Research Advisee*), G.T. Bertini (*Undergraduate Research Advisee*), and R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*). Dynamic Changes in the Amundsen Sea Embayment, *Eos Trans. AGU, Fall Meet. Suppl.*, 2011.
- Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), K. Christianson (*former Ph.D. Candidate*), **B.R. Parizek**, R.B. Alley, and S. Anandkrishnan. Coupled ice shelf-ocean modeling and the stability of Thwaites Glacier. Invited seminar at University of Texas Institute for Geophysics, Austin, TX. October 7, 2011.
- Parizek, B.R.**, R.A. Edwards (*Undergraduate Research Advisee*), D. Wolfe (*Undergraduate Research Advisee*), G.T. Bertini (*Undergraduate Research Advisee*), and R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*). Regional Modeling of Thwaites Glacier, 5th SeaRISE Workshop, NASA Goddard Space Flight Center. Presented to SeaRISE participants and Thomas Wagner (Cryosphere Program Manager, Earth Science Division, Science Mission Directorate), September 27, 2011.
- Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), K. Christianson (*former Ph.D. Candidate*), **B.R. Parizek**, S. Anandkrishnan, and R.B. Alley. A viscoelastic flowline model applied to tidal forcing of Bindschadler Ice Stream, West Antarctica. WAIS: The West Antarctic Ice Sheet Initiative, 2011 WAIS Workshop, Eighteenth Annual WAIS Workshop, Loveland, CO. September 21-23, 2011.
- Alley, R.B., S. Anandkrishnan, **B.R. Parizek**, R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), and H.J. Horgan (*invited*). The bumpy path to grounding-line (in)stability—past, present and future, *Eos Trans. AGU, Fall Meet. Suppl.*, 2010.
- Bertini, G.T. (*Undergraduate Research Advisee*), **B.R. Parizek**, R.A. Edwards (*Undergraduate Research Advisee*), and D. S. Wolfe (*Undergraduate Research Advisee*). Regional Modeling of Pine Island Glacier: A contribution to SeaRISE, WAIS: The West Antarctic Ice Sheet Initiative, 2010 WAIS Workshop, Seventeenth Annual WAIS Workshop, Raystown, PA. September 23-25, 2010.
- Edwards, R.A. (*Undergraduate Research Advisee*), **B.R. Parizek**, D. S. Wolfe (*Undergraduate Research Advisee*), and G.T. Bertini (*Undergraduate Research Advisee*). Thwaites Glacier Dynamics: Prognostic study of a West Antarctic outlet system, WAIS: The West Antarctic Ice Sheet Initiative, 2010 WAIS Workshop, Seventeenth Annual WAIS Workshop, Raystown, PA. September 23-25, 2010.
- Wolfe, D.S. (*Undergraduate Research Advisee*), **B.R. Parizek**, G.T. Bertini (*Undergraduate Research*

- Advisee*), and R.A. Edwards (*Undergraduate Research Advisee*). A regional modeling study of Jakobshavn Isbrae's response to SeaRISE forcing, WAIS: The West Antarctic Ice Sheet Initiative, 2010 WAIS Workshop, Seventeenth Annual WAIS Workshop, Raystown, PA. September 23-25, 2010.
- Parizek, B.R.**, Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), Rinehart, S.K. (*Undergraduate Research Advisee*). Outlet glacier-ice shelf-ocean interactions: Is the tail wagging the dog?, *Eos Trans. AGU*, v. 90, no. 52, *Fall Meet. Suppl.*, 2009.
- Amador, N.S. (*served on Ph.D. Committee*), Lampkin, D.J., **Parizek, B.R.**, Farness, K.L., and Jezek, K.C.. Spatio-temporal relationships between supra-glacial lake distribution and surface velocity fields in western Greenland, *Eos Trans. AGU*, v. 90, no. 52, *Fall Meet. Suppl.*, 2009.
- Alley, R.B., Anandakrishnan, S., Pollard, D., **Parizek, B.R.**, and Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*). Thermal forcing of ice sheets, *Eos Trans. AGU*, v. 90, no. 52, *Fall Meet. Suppl.*, 2009.
- Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), Dupont, T.K., Holland, D.M., **Parizek, B.R.**, Alley, R.B.. Initial effects of oceanic warming on a coupled ocean-ice shelf-ice stream system, WAIS: The West Antarctic Ice Sheet Initiative, 2009 WAIS/FRISP Workshop, Sixteenth Annual WAIS Workshop, Eatonville, Washington. September 27, 2009.
- Parizek, B.R.**, Alley, R.B., Dupont, T.K., Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), Anandakrishnan, S.. Ice sheets (and models) do not like hard kicks: Simulating ice-shelf removal scenarios, 14th Annual CCSM Workshop, Breckenridge, CO., June 15, 2009.
- Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), Dupont, T.K., Holland, D.M., **Parizek, B.R.**, Alley, R.B.. Initial effects of oceanic warming on a coupled ocean-ice shelf-ice stream system, Midwest Glaciology Meeting, Chicago, IL. March 27, 2009.
- Dupont, T.K., D.S. Lindsey (*Ph.D. Candidate at UCI*), and **B.R. Parizek**. Comparison of the side drag and buttressing generated by flow-line and plan-view models of ice shelves. *Eos Trans. AGU*, v. 89, no. 53, *Fall Meet. Suppl.*, 2008.
- Parizek, B.R.**, R.B. Alley, T.K. Dupont, R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), and S. Anandakrishnan. Effect of Climate Cycling and Meltwater Plumbing on Ice-Sheet Grounding-Line Migration. *Eos Trans. AGU*, v. 89, no. 53, *Fall Meet. Suppl.*, 2008.
- Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), T.K. Dupont, **B.R. Parizek**, and R. B. Alley. Effects of Basal-Melting Distribution on the Retreat of Ice-Shelf Grounding Lines. *Eos Trans. AGU*, v. 89, no. 53, *Fall Meet. Suppl.*, 2008.
- Parizek, B.R.**. Ice-sheet dynamics: faster than "glacial". Speaker at the Natural Resources Colloquium at Penn State DuBois, November, 2008.
- Alley, R.B., S. Anandakrishnan, R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), **B.R. Parizek**, T.K. Dupont, and D. Pollard. Springing Forward: The Need for Viscoelastic Ice-Flow Modeling. *WAIS: The West Antarctic Ice Sheet Initiative, Fifteenth Annual Workshop*, Algonkian Meeting Center, Sterling, Virginia, October, 2008.
- Parizek, B.R.**, R.B. Alley, T.K. Dupont, R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*), and S. Anandakrishnan. Effect of Climate Cycling and Meltwater Plumbing on Ice-Sheet Grounding-Line Migration. *WAIS: The West Antarctic Ice Sheet Initiative, Fifteenth Annual Workshop*, Algonkian Meeting Center, Sterling, Virginia, October, 2008.
- Anandakrishnan, S., R.B. Alley, and **B.R. Parizek**. Ice Dynamics, Effects of Ocean and Atmospheric Temperature Changes. *2008 Joint Meeting Program of The Geological Society of America, Soil Science of America, American Society of Agronomy, Crop Science Society of America, Gulf Coast Association of Geological Societies with the Gulf Coast Section SEPM*, Houston, TX, October, 2008.
- Walker, R.T. (*former co-Mentored Post Doctoral Scholar/Research Associate*), T.K. Dupont, **B.R.**

- Parizek**, and R. B. Alley. Effects of basal-melting distribution on the retreat of ice-shelf grounding lines. *Forum for Research into Ice Shelf Processes/West Antarctic Ice Sheet Initiative Joint Workshop*, Hosted by the British Antarctic Survey in Castleton, UK, September, 2008.
- Parizek, B.R.**, R.B. Alley, T.K. Dupont, and R.T. Walker (*former co-Mentored Post Doctoral Scholar/Research Associate*). Regional Ice-Sheet Responses to Localized Forcings. *American Quaternary Association, Program and Abstracts of the 2008 Biennial Meeting: Quaternary Ice Sheet-Ocean Interactions and Landscape Responses*, June, 2008.
- Alley, R.B., I. Joughin, H.J. Horgan (*former Ph.D. Candidate*), T.K. Dupont, **B.R. Parizek**, S. Anandakrishnan, and K.M. Cuffey. A first calving law for ice shelves: spreading-rate control of calving rate. *Eos Trans. AGU*, v. 88, no. 52, *Fall Meet. Suppl.*, 2007.
- Dupont, T.K., R.B. Alley, H. Horgan (*former Ph.D. Candidate*), **B.R. Parizek**, and I. Joughin. Calving Dynamics in an Ice-Stream/Ice-Shelf Model: Are Basal and Lateral Drag Stabilizing? *Eos Trans. AGU*, v. 88, no. 52, *Fall Meet. Suppl.*, 2007.
- Parizek, B.R.**, R.B. Alley, T.K. Dupont, and I.J. du Bois (*Undergraduate Research Advisee*). Greenland: Beyond "ice-sheet" dynamics. *Eos Trans. AGU*, v. 88, no. 52, *Fall Meet. Suppl.*, 2007.
- Alley, R.B., I. Joughin, H. Horgan (*former Ph.D. Candidate*), T.K. Dupont, **B.R. Parizek**, S. Anandakrishnan, S., and K.M. Cuffey. A calving law for ice shelves: spreading-rate control of calving rate. *WAIS: The West Antarctic Ice Sheet Initiative, 2007 WAIS/FRISP Workshop, Fourteenth Annual WAIS Workshop*, Algonkian Meeting Center, Sterling, Virginia, September, 2007.
- du Bois, I. (*Undergraduate Research Advisee*) and **B.R. Parizek**. Numerical modeling of subglacial-sediment dynamics. *WAIS: The West Antarctic Ice Sheet Initiative, 2007 WAIS/FRISP Workshop, Fourteenth Annual WAIS Workshop*, Algonkian Meeting Center, Sterling, VA, September, 2007.
- Dupont, T.K., R.B. Alley, H. Horgan (*Ph.D. Candidate*), I. Joughin, and **B.R. Parizek**. When the Bough Breaks: Implementing an Empirical Calving Rule in a Dynamic Stream/Shelf Model. *WAIS: The West Antarctic Ice Sheet Initiative, 2007 WAIS/FRISP Workshop, Fourteenth Annual WAIS Workshop*, Algonkian Meeting Center, Sterling, Virginia, September, 2007.
- Bindschadler, R.A., **Parizek, B.R.**, R. Arthern, T. Payne, and C.L. Hulbe. How could we tell if we are seeing the emergence or continuation of a major deglaciation in the ASE? Supplementary: If collapse of the marine ice sheet in ASE begins is it inevitable that major collapse will occur? Would retreat of WAIS be a step-wise process leading to short bursts of rapid sea-level rise -- what could halt/pause the process of retreat? (invited). *WALSE Workshop*, UT Austin, March, 2007.
- Parizek, B.R.**, R. Arthern, T. Payne, and C.L. Hulbe. How do changing boundary conditions impact a marine ice sheet? Is there a possibility that changing boundary conditions are not required to cause change in WAIS? (invited). *WALSE Workshop*, UT Austin, March, 2007.
- Dupont, T.K., R.B. Alley, and **B.R. Parizek**. Subglacial-Lake Formation by Ice-Shelf Grounding: Implications for Outburst Flooding. *International Glaciological Society, International Symposium on Cryospheric Indicators of Global Climate Change*, Cambridge, England, August, 2006.
- Parizek, B.R.**, R.B. Alley, and T.K. Dupont. A mechanism for inland migration of surface meltwater access to the bed. *International Glaciological Society, International Symposium on Cryospheric Indicators of Global Climate Change*, Cambridge, England, August, 2006.
- Parizek, B.R.** and T.K. Dupont. Capturing fast dynamics in ice sheets -or- Ice-Sheet Models: More fun than they ought to be.... *CReSIS Videoconference Talk*, May 25, 2006.
- Parizek, B.R.**. Ice-sheet dynamics: a non-"glacial" response to climate change. Invited speaker at the Physics Department Seminar at The College of New Jersey, March, 2006.
- Parizek, B.R.**. Ice-sheet dynamics: a non-"glacial" response to climate change. Invited speaker at the Department of Earth and Environmental Sciences Seminar at California State University, Fresno, March, 2006.
- Parizek, B.R.**. Ice-sheet dynamics: a non-"glacial" response to climate change. Invited speaker at the Earth System Science Department Seminar at the University of California, Irvine, March, 2006.

- Parizek, B.R.** Simulating Ice Sheets: The Good, The Bad, and the UTIG. Invited speaker at the Institute for Geophysics Seminar at the University of Texas at Austin, February, 2006.
- Parizek, B.R.**, R.B. Alley, T.K. Dupont, and D. Vacco. Ice-flow sensitivity to variable resistive stresses, *Eos Trans. AGU*, v. 86, no. 52, Fall Meet. Suppl., 2005.
- Parizek, B.R.** and R.B. Alley. Towards understanding and simulating the fast dynamical links within the ice sheets. *The Gary Comer Abrupt Climate Change Fellowship*, Palisades, NY, October, 2005.
- Parizek, B.R.**, R.B. Alley, and T.K. Dupont. Ice-flow sensitivity to sticky spots, side shear, and buttressing. *WAIS: The West Antarctic Ice Sheet Initiative, Twelfth Annual Workshop*, Algonkian Meeting Center, Sterling, VA, September, 2005.
- Parizek, R.R. and **B.R. Parizek**. Significance of stagnation on the timing of mass wastage of the Laurentide Ice Sheet. *Annual Meeting, Geological Society of America Abstracts with Programs*, November, 2004.
- Alley, R.B., T.K. Dupont, **B.R. Parizek**, and S. Anandakrishnan. Possible role for surficial lakes in meltwater drainage through cold glaciers. *WAIS: The West Antarctic Ice Sheet Initiative, Eleventh Annual Workshop*, Algonkian Meeting Center, Sterling, VA, September, 2004.
- Vacco, D. (*Ph.D. Candidate*), R.B. Alley, D. Pollard, T.K. Dupont, and **B.R. Parizek**. Modeling of glacial stagnation vs. glacial retreat. *WAIS: The West Antarctic Ice Sheet Initiative, Eleventh Annual Workshop*, Algonkian Meeting Center, Sterling, VA, September, 2004.
- Parizek, B.R.** and R.B. Alley. Insights into WAIS and GIS dynamics: Summary of modeling results. *WAIS: The West Antarctic Ice Sheet Initiative, Eleventh Annual Workshop*, Algonkian Meeting Center, Sterling, VA, September, 2004.
- Alley, R.B., T.K. Dupont, **B.R. Parizek**, and S. Anandakrishnan. Possible role for surficial lakes in meltwater drainage from cold glaciers. *International Glaciological Society, International Symposium on Ice and Water Interactions, Processes across the Phase Boundary*, Portland, OR, July, 2004.
- Parizek, B.R.** and R.B. Alley. Effects of increased melt on the dynamics of the Greenland ice sheet. *International Glaciological Society, International Symposium on Ice and Water Interactions, Processes across the Phase Boundary*, Portland, OR, July, 2004.
- Parizek, B.R.** and R.B. Alley. Acceleration of projected sea-level rise due to rapid response of the Greenland ice sheet to surface warming: Numerical simulations. *The Comer Abrupt Climate Change Fellowship*, Palisades, NY, April, 2004.
- Parizek, B.R.** Hypothermia or heat stroke: Ice sheets in the climate system. Invited speaker at the Department of Geological Sciences Colloquium at the University of North Carolina at Chapel Hill, March, 2004.
- Alley, R.B., T.K. Dupont, **B.R. Parizek**, S. Anandakrishnan, D.E. Lawson, G.J. Larson, and E.B. Evenson. Outburst Flooding and Surge Initiation. *Eos, Transactions, American Geophysical Union, 2003 Fall Meeting*, v. 84, no. 46, 2003.
- Alley, R.B., S. Anandakrishnan, T.K. Dupont, and **B.R. Parizek**. Ice streams and outburst flooding. *WAIS: The West Antarctic Ice Sheet Initiative, Tenth Annual Workshop*, Algonkian Meeting Center, Sterling, VA, September, 2003.
- Parizek, B.R.** and R.B. Alley. Meltwater feedbacks and acceleration of sea-level rise: likely in Greenland, possible in WAIS? *WAIS: The West Antarctic Ice Sheet Initiative, Tenth Annual Workshop*, Algonkian Meeting Center, Sterling, VA, September, 2003.
- Parizek, B.R.** and R.B. Alley. Implications of increased surface melt under global warming scenarios: Greenland ice-sheet simulations. *EGS-AGU-EUG Joint Assembly, 2003 Spring Meeting*, April, 2003.
- Hulbe, C.L., M.A. Fahnestock and **B. R. Parizek**. West Antarctic Ice Stream Discharge Variability: the evidence, a mechanism, and its implications. *Eos, Transactions, American Geophysical Union, 2002 Fall Meeting*, v. 83, no. 47, November, 2002.
- Alley, R.B., **B.R. Parizek**, and S. Anandakrishnan. Ice streams have wet feet--the importance of a through-going water system. *WAIS: The West Antarctic Ice Sheet Initiative, Ninth Annual Workshop*, Algonkian Meeting Center, Sterling, VA, September, 2002.

- Parizek, B.R.** and R.B. Alley. Ice thickness, isostasy, and sea-level: A numerical study of the Siple Coast grounding line. *WAIS: The West Antarctic Ice Sheet Initiative, Ninth Annual Workshop*, Algonkian Meeting Center, Sterling, VA, September, 2002.
- Parizek, B.R.**, R.A. Bindschadler, and R.B. Alley. Thermal balance beneath the Ross Ice Streams, West Antarctica: Implications for ice-stream evolution and grounding-line migration. *NASA/Goddard Space Flight Center, Graduate Student Researchers Program, 2002 Annual Symposium Program Booklet*, Greenbelt, MD, September, 2002.
- Parizek, B.R.**, R.B. Alley, and C.L. Hulbe. Subglacial thermal balance permits ongoing grounding-line retreat along the Siple Coast of West Antarctica. *International Glaciological Society, International Symposium on Fast Glacier Flow*, Yakutat, AK, June, 2002.
- Parizek, B.R.** and R.B. Alley. Data-driven modelling of the West Antarctic ice sheet: Past, present, and future? (invited) *Eos, Transactions, American Geophysical Union, 2002 Spring Meeting*, v. 83, no. 19, May, 2002.
- Parizek, B.R.** Gangrene or just mild frostbite? Flowline simulations suggest ongoing retreat and continued streaming along the Siple Coast, West Antarctica. Invited speaker at the Oceans and Ice Branch Seminar at NASA GSFC, April, 2002.
- Alley, R.B., **B.R. Parizek**, M.A. Fahnestock, and D.R. MacAyeal. Flow modeling of Heinrich events: Laurentide ice instability is still the best story. *NOAA CORC ARCHES Heinrich Events Miniconference*, Lamont-Doherty Earth Observatory of Columbia University, October, 2001.
- Parizek, B.R.** and R.B. Alley. Cumulative melt beneath the ice-stream catchments: A source of long-term stability for the Siple Coast ice streams? *WAIS: The West Antarctic Ice Sheet Initiative, Eighth Annual Workshop*, Algonkian Meeting Center, Sterling, VA, September, 2001.
- Alley, R.B., S. Anandakrishnan, H. Conway, and **B.R. Parizek**. Ice streams are (almost) forever because they are all wet. *WAIS: The West Antarctic Ice Sheet Initiative, Eighth Annual Workshop*, Algonkian Meeting Center, Sterling, VA, September, 2001.
- Parizek, B.R.**, R.B. Alley, and D.R. MacAyeal. Ice Dynamics of the Laurentide Ice Sheet's Hudson-Bay Lobe. *Eos, Transactions, American Geophysical Union, 2000 Fall Meeting*, v. 81, no. 48, November, 2000.
- Parizek, B.R.**, R.B. Alley, and D.R. MacAyeal. The Laurentide Ice Sheet as a "Low-Pass Filter" of Climate Forcing: In Search of Heinrich Events. Annual Midwest Glaciology Meeting, University Park, PA, March, 2000.
- Parizek, B.R.**, D.R. MacAyeal, and R.B. Alley. Fast 2--D Thermo--Mechanical Ice Flow Model for Heinrich Event Simulations (invited). *Eos, Transactions, American Geophysical Union, 1997 Fall Meeting*, v. 78, no. 46, November, 1997.
- Parizek, B.R.** Greenland EISMINT Benchmark. Annual Midwest Glaciology Meeting, Madison, WI, May, 1997.
- Parizek, R.R., **B.R. Parizek**, G.B. Parizek, E.R. Parizek, and K.A. Parizek. Penn State's Waste Water Land Application Nutrient Management Program. *Annual Meeting, Geological Society of America Abstracts with Programs*, v. 27, no. 6, October, 1995.
- Parizek, R.R., K.A. Parizek, and **B.R. Parizek**. Additional Evidence for Stress Relief Fracture--Enhanced Hydraulic Conductivities. *Annual Meeting, Geological Society of America Abstracts with Programs*, v. 26, no. 7, September, 1994.

Research highlights for NSF panel review

Anandakrishnan, S., R.B. Alley, **B.R. Parizek**, D. Pollard, NSF CReSIS Center review (October 5, 2014)

Visiting Scholar for collaborative research

Parizek, B.R. NASA GSFC, NASA JPL's ISSM implementation.

I was a visiting scholar at NASA GSFC, where I worked with R.T. Walker and D. Lampkin on implementing ISSM. (August 18-21, 2013)

Parizek, B.R. Ice modeling research at University of California, Irvine. Research trip to Irvine to work on ice stream-ice shelf modeling with Professor Todd K. Dupont, PhD student D. Seneca Lindsey, and Ryan T. Walker. (Dec. 14-16, 2011)

Parizek, B.R. Ice modeling research at University of California, Irvine. Research trip to Irvine to work on ice stream-ice shelf modeling with Professor Todd K. Dupont, PhD student D. Seneca Lindsey, and Ryan T. Walker. (June 25-29, 2011)

Parizek, B.R. Ice-sheet and ice-shelf modeling research at the University of Chicago. Research trips to work on numerical modeling with Professor Douglas R. MacAyeal. Development of PSU/UofC flowline model. (Sp 1997; Fa 1997; Sp 1999)

Workshops

Parizek, B.R. (*Invited participant*) Specialist to the third Climate and Cryosphere and NYU Abu Dhabi Institute sponsored Rising Coastal Seas on a Warming Earth III Workshop at the campus of NYUAD on Saadiyat Island, UAE (May 2018)

Parizek, B.R. (*Invited participant*) Specialist to the second Climate and Cryosphere and NYU Abu Dhabi Institute sponsored Rising Coastal Seas on a Warming Earth II Workshop at the campus of NYUAD on Saadiyat Island, UAE (May 2016)

Parizek, B. R., Science and Technology Center Writing Workshop, University Park, PA. National. This was a two-day workshop for all collaborators to work together on writing a full proposal for the \$12,658,000 WAISPROBE NSF STC. (April 23-24, 2015)

Alley, R. B., **Parizek, B. R.**, Stevens, N. (*M.S. Advisee*), (*Invited participant*) VOICE (Volcano, Ocean, Ice, and Carbon Experiments) AGU meeting, Harvard University, San Francisco, CA (December 15, 2014)

Parizek, B.R. (*Invited participant*) Pine Island Glacier Data Analysis and Modeling, New York University Abu Dhabi Center for Global Sea-Level Change and the National Science Foundation and National Aeronautics and Space Administration Climate and Cryosphere's West Antarctica Glacier-Ocean Modeling, New York University, National. (December 6, 2014)

Parizek, B.R. (*Invited participant*) Ice Sheet MIP for CMIP6 Meeting, National Aeronautics and Space Administration (NASA), NASA Goddard Space Flight Center, International (July 16-18, 2014)

Parizek, B.R. (*Invited participant*) Specialist to the first Climate and Cryosphere and NYU Abu Dhabi Institute sponsored Sea Level Workshop at the campus of NYUAD on Saadiyat Island, UAE (April 2014)

Parizek, B.R. (*Participant*) Ice Sheet System Model Workshop, NASA Jet Propulsion Laboratory and California Institute of Technology, Pasadena, CA, <http://issm.jpl.nasa.gov/issmworshops/pastworkshops/issmworkshop2011/> (December 12, 2011)

Parizek, B.R. (*Participant*) CCSM Workshop including Land Ice Working Group and SeaRISE Workshops with undergraduate researchers G. Bertini, R. Edwards, and D. Wolfe, Breckenridge, CO (June 30-July 1, 2010).

Parizek, B.R. (*Participant*) SeaRISE Workshop in Boulder, CO with undergraduate advisee Samantha Rinehart (February 18, 2010)

Parizek, B.R. (*Participant*) SeaRISE meeting in San Francisco, CA. As a member of SeaRISE, I attended this meeting to help discuss our research effort with our international collaborators (December 17, 2009)

Parizek, B.R. (*Participant*) Glimmer-CISM meeting in San Francisco, CA to discuss the new community ice sheet

model (December 16, 2009)

Parizek, B.R. (*Participant*) GENIE-I Earth System Modeling Workshop. I attended this workshop with my undergraduate research advisee, Samantha Rinehart (July 27, 2009 - July 28, 2009)

Parizek, B.R. (*Invited Participant*) Next Generation Ice Sheet Modeling Workshop at Los Alamos National Lab. (Invited participant. Received a \$1,089.29 travel grant from LANL and a \$53.00 travel grant from Penn State DuBois. This workshop was designed to discuss all phases of development of a community ice sheet model that will be used, in part, to improve assessments of the impact of ice sheets on climate change and eustatic sea level for future Intergovernmental Panel on Climate Change (IPCC) reports. Following discussions at this workshop, I am a contributing member of the i) Ice Modeling, ii) Hydrology, and iii) Initialization Assessment Groups and have been participating in teleconferences throughout the Fall, 2008 and Spring, 2009) (August, 2008)

Parizek, B.R. Selected participant and first author on an ice-modeling lesson plan, *An ice-sheet modeling exercise: Theory, data, and the importance that the twain shall meet*, at the On the Cutting Edge--Professional Development for Geoscience Faculty: Teaching Climate Change with Ice Core Data Workshop, State College, PA (June, 2008)

Parizek, B.R. (*Invited participant*) The Second Indo-American Frontiers of Science Symposium. National Academy of Sciences' Arnold and Mabel Beckman Center in Irvine, California. (Sponsored by the Indo-U.S. Science and Technology Forum in partnership with the U.S. National Academy of Sciences. This is the Academy's premiere activity for distinguished young scientists.) (January, 2007)

Parizek, B.R. (*Invited participant*) Workshop on Ice Sheet Modeling. Geophysical Fluid Dynamics Laboratory (GFDL), Princeton University. (Invited participant in the "Workshop on Ice Sheet Modeling". "...A one-day workshop on ice sheet modeling was held at NOAA's Geophysical Fluid Dynamics Laboratory (GFDL) on 8 January 2007. Sponsorship was provided by NOAA and by the Program in Science, Technology, and Environmental Policy of the Woodrow Wilson School of Public and International Affairs at Princeton University. The workshop focused on identifying key scientific issues and organizational requirements for a research effort appropriate to producing a new generation of models. Specific objectives included providing GFDL and other U.S. and international modeling centers with further insight into the role they could play in the ice-sheet modeling arena, and initiating a collaborative network that could engage several groups developing largely independent models over time. Sponsored by the National Oceanic & Atmospheric Administration (NOAA) Geophysical Fluid Dynamics Laboratory (GFDL), Princeton University.") (January, 2007)

Parizek, B.R. (*Invited participant*) NASA Sea Level Workshop (April, 2005)

Funded Projects and Grants

Completed

2013-2018, *FESD Type I: VOICE-Volcano, Ocean, Ice, and Carbon Experiments*, National Science Foundation: Frontiers in Earth System Dynamics Program, Division of Atmospheric and Geospace Sciences, Directorate for Geosciences, Federal Agencies. Alley, R. B. (Principal Investigator), **Parizek, B. R.** (*Co-Investigator*), Anandkrishnan, S. (Co-Investigator), Pollard, D. (Co-Investigator), Total requested: \$225,000.00. Total awarded: \$134,999.00. [subcontract with Harvard University]

2015-2018, *Collaborative Research: Evaluating retreat in the Amundsen Sea Embayment: Assessing controlling processes, uncertainties, and projections*. National Science Foundation, Federal Agencies. **Parizek, B. R.** (*Project Leader/Principal Investigator*), Pollard, D. (Co-Investigator), Total requested: \$460,057.00. Total awarded: \$460,057.00.

2010-2017, *The Center for the Remote Sensing of Ice Sheets (CRISIS)*, Kansas, University of, Universities and Colleges. Anandkrishnan, S. (Principal Investigator), Alley, R. B. (Co-Principal Investigator), Pollard, D. (Co-Principal Investigator), **Parizek, B. R.** (*Co-Principal Investigator*), Contract, Total requested: \$1,896,284. Total awarded: \$1,896,284. [Penn State Subcontract

- Performance Site to The University of Kansas Center for Research, Inc., whose total award was \$17,976,000.00]
- 2015-2017, *The Importance of Basal characterization beneath Thwaites Glacier, West Antarctica*, National Aeronautics and Space Administration, Federal Agencies. **Parizek, B. R.** (Project Leader/Principal Investigator), Muto, A. (Co-Investigator), Total requested: \$71,498.00. Total awarded: \$71,498.00.
- 2010-2014, *Investigating Grounding-Line Stability and Processes using ICESat and CryoSat-2 with a Viscoelastic Flowline Model (Revised)*, National Aeronautics and Space Administration, Federal Agencies. Anandakrishnan, S. (Principal Investigator), Alley, R. B. (Co-Principal Investigator), **Parizek, B. R.** (Co-Investigator), and Walker, R. (Co-Investigator), Collaborator: H. Horgan, Grant, Total requested: \$433,697.00. Total awarded: \$433,697.00.
- 2009-2013, *Development of a Viscoelastic Ice-flow Model for Process-based Prediction of Ice-Sheet Evolution*. National Science Foundation: Arctic Sciences Section, Arctic System Science Program. PLR-0909335. Principal Investigator/Project Director: R.B. Alley. Co-Investigators: **B.R. Parizek** and R.T. Walker. Effective 09/01/09-08/31/2013; \$295,009.00.
- 2009-2012, *Regional Modeling of Ice-Stream--Ice shelf--Ocean Interactions in Support of the SeaRISE Effort to Assess Ice Sheet Contributions to Sea Level through the 21st Century*, National Aeronautics and Space Administration, Federal Agencies, NNX-09-AV94G. Principal Investigator/Project Director: **B.R. Parizek**. Effective 10/01/2009; duration of 36 months, \$150,000.00.
- 2007-2012, *Collaborative Research: Synthesis of Thwaites Glacier Dynamics: Diagnostic and Prognostic Sensitivity Studies of a West Antarctic Outlet System*. National Science Foundation: Antarctic Sciences Section, Office of Polar Programs. 0636724. Principal Investigator/Project Director: **B.R. Parizek**. Effective 04/01/07; duration of 36 months. As Project Director, project total: \$578,362. Successfully transferred to PSU as Grant # 0758274. \$194,466.00. (Prior to transfer from TCNJ, original institutional grant: \$219,246.00)
- 2005-2010, *Collaborative Research: A synthesis of rapid meltwater and ice discharge changes: large forcings from the ice with impacts on global sea level and North Atlantic freshwater budgets*. National Science Foundation: Arctic Sciences Section, Arctic System Science Program. 0531211. Principal Investigator: R.B. Alley. Co-Investigators: **B.R. Parizek** and D.B. Reusch. Effective 09/01/05; duration of 36 months, 12 month extension, \$194,466.00.
- 2005-2009, *Whole-Ice-Sheet Flow Modeling of the Greenland Ice Sheet: Volume Response to Mass-Balance Forcing*. NASA Research Announcement NRA-04-OES-02. (revised budget). Principal Investigator/Project Director: R.B. Alley. Co-Investigators: **B.R. Parizek** and D.B. Reusch. Effective 12/1/05; duration of 24 months, extension granted, \$70,000.00.
- August, 2008, *Next Generation Ice Sheet Modeling Workshop* at Los Alamos National Lab. Travel grant from Penn State DuBois, \$53.00, and LANL, \$1,089.29.
- Fall, 2007, *Groundwater Simulation Systems: Visualizing processes in the subsurface* and an Air Pressure Mat. University College Teaching Development Grant (TDG), \$635.00.
- October, 2006, Awarded Full Travel and Conference support from The College of New Jersey to bring John Gannon and Andrew Grant (Senior Physics Majors at TCNJ) to the 2006 Geological Society of America Annual Meeting in Philadelphia, PA, \$639.51.

In Progress

- 193704, Grant, NSFPLR-NERC: Ground Geophysics Survey of Thwaites Glacier, National Science Foundation, Federal Agencies, \$409,048.00, Awarded. (March 15, 2018 - February 29, 2024)
Anandakrishnan, S. (Project Leader/Principal Investigator), R.B. Alley (co-PI), **Parizek, B. R.** (Co-PI)
Amendments:
OSP Number: 217565, Total awarded: \$372,083.00. Total anticipated: \$2,599,707.00. March 15, 2018 - February 29, 2024
OSP Number: 217560, Total awarded: \$467,166.00. Total anticipated: \$2,310,411.00. March 15, 2018 - February 29, 2024

OSP Number: 216043, Total awarded: \$580,694.00. Total anticipated: \$2,310,411.00. March 15, 2018 - February 29, 2024

OSP Number: 207936, Total awarded: \$481,420.00. Total anticipated: \$890,468.00. March 15, 2018 - February 29, 2024

201086, Grant, Sensor Networks on Greenland Glaciers (PHASE I), Heising-Simons Foundation, Nonprofit Foundations, \$489,327.00, Awarded. (June 1, 2018 - March 31, 2024)

Anandkrishnan, S. (*Principal Investigator*), S.G. Bilen (*Co-PI*), R.B. Alley (*co-PI*), J. Langelaan (*Co-PI*), **Parizek, B. R.** (*Co-PI*)

Amendments:

OSP Number: 227859, Total awarded: \$425,000.00. Total anticipated: \$1,059,327.00. June 1, 2018 - March 31, 2024

OSP Number: 214323, Total awarded: \$145,000.00. Total anticipated: \$634,427.00. June 1, 2018 - December 31, 2020