

CHRISTOPHER J. POULSEN

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EDUCATION

- 1999 Ph.D., Geosciences, Pennsylvania State University, University Park, PA
1994 B.A., Geology, Carleton College, Northfield, MN

PROFESSIONAL POSITIONS

- 2014-pres Chair, Dept. of Earth and Environmental Sciences, University of Michigan
2013-pres Professor, Dept. of Earth and Environmental Sciences, University of Michigan
2010-2014 Associate Chair for Graduate Studies, Dept. of Earth and Environmental Sciences, University of Michigan
2010-pres Faculty Associate, Program in the Environment, University of Michigan
2007-2013 Associate Professor, Dept. of Earth and Environmental Sciences, University of Michigan
2005-pres Adjunct Professor, Dept. of Atmospheric, Oceanic, and Space Sciences
2003-2007 Assistant Professor, Dept. of Geological Sciences, University of Michigan
2000-2003 Assistant Professor, Dept. of Earth Sciences, University of Southern California
1999-2000 Research Associate, Dept. of Geophysics, University of Chicago

HONORS/AWARDS

- 2013 John Dewey Teaching Award, University of Michigan
2012 Wayne Carmichael Lecturer in Environmental Science, Wright State University
2009 Alexander von Humboldt Research Fellowship, Germany
2007 Fellow of the Geological Society of America
2001 Innovative Teaching Award, University of Southern California
1998 International Paleoceanography Conference VI, Student Poster Award
1998 Muan Fellowship, Pennsylvania State University
1997 Shell Doctoral Fellowship, Pennsylvania State University
1996 NASA Space Grant Fellowship, Pennsylvania State University
1994 U.S.G.S., N.A.G.T.-U.S.G.S. Internship
1993 Keck Fellowship, Carleton College

EDITORIAL AND PROFESSIONAL SERVICE

- 2013-2021 Associate Editor, *American Journal of Science*
2017-2020 Associate Editor, *Paleoceanography*
2017-2018 Member, Organizing Committee for Paleoclimate Theme, Goldschmidt 2018
2017 Guest Editor, *Proceedings of the National Academy of Sciences*.
2017 External Reviewer, Dept of Biodiversity, Earth and Environmental Science, Drexel University, Philadelphia, PA
2014-2016 Member, Organizing Committee for NSF-sponsored US-Taiwan workshop on "Feedbacks and Coupling among Mountain Building, Surface Processes, and Climate"
2014-2017 Member, CISL High Performance Computing Allocation Panel (CHAP)
2011-2014 Panelist (twice), NSF Sedimentary Geology and Paleontology Panel
2010 Reviewer, NRC Report "Understanding Earth's Deep Past: Lessons for Our Climate Future"
2007-2012 Member, AGU Paleoceanography/Paleoclimatology Focus Group
2007 Panelist, AGU Ocean Science Section Nominations Committee

2003 Reviewer, Leg 207 USSSP Post-Cruise Science Proposal Panel
2003 Member, USC Sea Grant Program Review Board (USC)

UNIVERSITY/COLLEGE SERVICE

2017 Panelist, "Negotiating the Faculty Offer", NextProf Science Workshop
2016-2017 Member, Themes Working Group, SEAS
2016-2017 Member, Launch Committee to mentor new faculty member (Huang)
2014-2015 Member, Launch Committee to mentor new faculty member (Smith)
2013-2014 Member, Launch Committee to mentor new faculty member (Cory)
2011-2014 University Senate Assembly (elected position)

DEPARTMENTAL SERVICE (IN DEPT OF EES UNLESS NOTED)

2014-2020 Department Chair
2010-2014 Associate Chair for Graduate Studies
2013 Promotions Committee (Assoc Res Prof), Chair
2012-2014 Executive Committee
2012 Promotions and Tenure Committee (Assoc Prof), Chair
2012 Promotions and Tenure Committee (Assoc Prof)
2011-2013 Scholarship Committee, Program of the Environment
2011-2012 Climate Change Faculty Search Committee
2010-2014 Graduate Admissions Committee, Chair
2009-2010 Promotions and Tenure Committee (Assoc Prof)
2008-2009 Executive Committee
2008-2009 Global Change faculty search committee (5 positions), Chair
2008-2009 Curriculum Committee, Dept. of AOSS
2007-2009 Upper Level Writing Requirement, Director
2007-2012 Camp Davis Redevelopment Committee
2007-2014 Curriculum Committee
2006-2008 Faculty coordinator, Michigan Geophysical Union
2006-2007 Earth System Science Faculty Search Committee
2004-2007 Turner Award Committee, Chair
2004-2006 Graduate Admissions Committee
2003-2014 Computer Committee
2004 Promotions Committee (Assoc Res Sci), Dept. of AOSS
2003 Earth System Science and Engineering Programmatic Committee

INVITED LECTURES/TALKS

2017 *Dept. of Geosciences, Western Michigan University, Kalamazoo, MI*
Midcontinent Paleobotanical Symposium, University of Michigan (Keynote speaker)
2016 Dept. of Geology & Geophysics, Yale University
Dept. of Geology, Kent State University
GSA Fall Meeting, Denver
Laboratoire des Sciences du Climat et de l'Environnement, Gif-sur-Yvette, France
2015 Dept. of Geosciences, Pennsylvania State University
2014 Dept. of Geological Sciences, University of Missouri
AGU Fall Meeting, San Francisco
Dept. of Earth and Planetary Sciences, Johns Hopkins
2013 Plenary Talk, Pre-Cenozoic Climate International Workshop, Toulouse, France
Michigan Basin Geological Society
2012 Program of Environmental Sciences, Wright State University
Dept. of Geology, Baylor University
Dept. of Earth Sciences, Dartmouth College
Dept. of Environmental and Earth System Science, Stanford University
2011 Instituto de Hidraulica e Hidrologia, La Paz, Bolivia
Dept. of Earth and Planetary Sciences, Northwestern University, Chicago

- IDEAS Seminar, Dept. of Earth and Environmental Sciences, University of Michigan
 AGU Fall Meeting, San Francisco
- 2010 Dept. of Earth and Planetary Sciences, University of New Mexico
 Institut für Geowissenschaften, Universität Tübingen, Germany
 AGU Fall Meeting, San Francisco
 GSA Annual Meeting, Denver, CO – 2 invited talks
- 2009 Centre National de la Recherche Scientifique, Toulouse, France
 AGU Fall Meeting, San Francisco
 Michigan Research Community, University of Michigan
- 2008 Dept. of Geology, University of California, Davis
 Dept. of Earth Sciences, Southern Methodist University
- 2007 GSA Annual Meeting, Denver
 Dept. of Geology, University of Kansas
 Kansas Geological Survey
 Dept. of Atmospheric, Oceanic, and Space Sciences, University of Michigan
 Michigan Research Community, University of Michigan
 EGU Annual Meeting, Vienna, Austria
 AAAS Annual Meeting, San Francisco
- 2006 Dept. of Geological Sciences, University of Nebraska
 School of Natural Resources and Environment, University of Michigan
- 2005 Dept. of Geology & Geophysics, Yale University
 Dept. of Geology, University of Cincinnati
- 2004 AGU Fall Meeting, San Francisco
 AOSS, University of Michigan
- 2003 Dept. of Geological Sciences, University of Michigan
 Geosciences Dept., Oregon State University
 Dept. of Earth Sciences, University of California, Riverside
- 2002 Santa Monica College, Los Angeles
 Ocean Science Meeting, Honolulu
 Cretaceous Ocean and Atmosphere Dynamics Meeting, Florissant, CO
- 2001 Dept. of Geology, Carleton College, MN
 Dept. of Earth Sciences, University of California, Los Angeles
- 2000 Dept. of Geology, California Institute of Technology
- 1999 Dept. of Earth Sciences, University of Southern California
- 1998 Dept. of Geosciences, University of Massachusetts Amherst

UNIVERSITY TEACHING/RESEARCH AWARDS

- 2012 Gilbert Whitaker Fund for the Improvement of Teaching (\$10,000), University of Michigan
- 2011 LSA Associate Professor Support Fund (\$100,000), University of Michigan
- 2009 Faculty Fellowship Enhancement Award (\$3000), University of Michigan

RESEARCH COMPUTING AWARDS

- 2016-2019 Investigation of Extratropical Mechanisms, Land-Surface Properties, and Seasonal Precipitation Processes on Saharan Rainfall and Simulation of the African Humid Period, NCAR CISL Computer Allocation (5,820,000 core hrs) on Cheyenne.
- 2015-2016 Renewal: Sources and circulation of intermediate and deep waters in the Late Cretaceous, NCAR CISL Computer Allocation (4,400,000 core hrs) on Yellowstone.
- 2014-2015 Simulation of CO₂-climate-vegetation feedbacks, NCAR CISL Computer Allocation (5,000,000 core hrs) on Yellowstone.
- 2014-2015 Sources and circulation of intermediate and deep waters in the Late Cretaceous, NCAR CISL Computer Allocation (3,670,000 core hrs) on Yellowstone.
- 2013-2014 Sources and circulation of intermediate and deep waters in the Late Cretaceous,

- 2012-2013 NCAR CISL Computer Allocation (200,000 core hrs) on Yellowstone. Evolution of moisture transport and meteoric $\delta^{18}\text{O}$ during mountain building: An investigation through paleoclimate simulation, NCAR CISL Computer Allocation (800,000 core hrs) on Yellowstone.
- 2010-2012 Slow and steady or fast and furious? Understanding Andean uplift and South American climate change through paleoclimate simulation, NCAR CISL Computer Allocation (200,000 GAUs) on Bluefire.

RESEARCH GRANTS, PENDING

- 2018-2022 True Positives: Biosignatures of high oxygen worlds, NASA Astrobiology Institute Cycle 8, \$7,096,562, \$438,606 to Poulsen (co-PI).

RESEARCH GRANTS (17, \$3,902,887), CURRENT AND PAST

- 2016-2019 Investigation of extratropical mechanisms, land-surface properties, and seasonal precipitation processes on Saharan rainfall and simulation of the African Humid Period, NSF P2C2, \$330,950 (PI).
- 2016-2019 Collaborative Research—Quantifying paleotopography and paleoclimate to test geodynamic models in the Peruvian Andes, NSF Tectonics, \$208,241 to Poulsen (co-PI).
- 2016-2021 Paleoclimate data assimilation for deep time, Heising-Simons Foundation, \$500,164 to Poulsen (PI).
- 2016-2019 Paleoclimate simulation of warm climate—Looking back to see the future, Heising-Simons Foundation, \$382,520 to Poulsen (PI).
- 2015-2016 Hydrological cycling and variability in terrestrial environments, UM Water Center, \$19,700 (PI).
- 2014-2018 Collaborative Research—Earth Life Transitions: Integrated Data-Model Analysis of CO_2 -Climate-Vegetation Feedbacks in a Dynamic Paleo-Icehouse, NSF Sedimentary Geology and Paleobiology, \$1,498,127, (\$330,030 to Poulsen) (co-PI).
- 2013-2016 Collaborative Research: Constraining sources and circulation patterns of intermediate and deep waters during the Late Cretaceous, NSF Marine Geology and Geophysics, \$559,228 (\$193,620 to Poulsen) (co-PI).
- 2013-2016 Collaborative Research: Linking erosional and climatic processes in regions of active mountain building, NSF Geomorphology, \$366,939 (\$204,048 to Poulsen) (co-PI).
- 2011-2013 EXP: Collaborative Research: Using smartphone-based participatory simulations to engage children in scientific thinking, NSF Cyberlearning, \$549,987 (\$86,720 to Poulsen) (co-PI).
- 2010-2013 Collaborative Research: Recovering surface uplift histories and climate dynamics of the Cenozoic North American Cordillera through integrated climate modeling and isotopic studies, NSF Tectonics, \$294,272 (\$191,974 to Poulsen) (co-PI).
- 2009-2012 Collaborative Research: Investigating climate system sensitivity to ice age orbital forcing, NSF P2C2, \$465,132 (\$245,660 to Poulsen) (PI).
- 2009-2013 CAUGHT: Central Andean uplift and the geodynamics of high topography, NSF Continental Dynamics, \$2,545,967 (\$243,776 to Poulsen) (co-PI).
- 2008-2010 Integration of physical and social sciences for development of a sustainable water resource policy in Bolivia, South America, UM Graham Environmental Sustainability Institute, \$191,475 (PI).
- 2008-2011 Quantifying the Cenozoic oxygen isotopic variability of precipitation on the Andes: A test of stable isotope paleoaltimetry and plateau uplift, NSF Tectonics, \$402,183 (PI).
- 2006-2009 Understanding climate change during the final stages of Late Paleozoic Gondwanan Glaciation—An integrated data-model study, NSF Sedimentary Geology and Paleobiology, \$1,092,934 (\$246,000 to Poulsen) (co-PI).
- 2003-2007 Modeling the role of solar variability in Late Pleistocene millennial-scale climate

- oscillations, NSF Paleoclimate Program, \$206,346 (PI).
- 2003-2007 Evaluation of the mid-Cretaceous cool tropics paradox using isotopic GCMs and foraminiferal and paleosol siderite $\delta^{18}\text{O}$ datasets, NSF Paleoclimate Program, \$279,004 (\$107,542 to Poulsen) (co-PI).
- 2001-2002 Tropical climate variability as a mechanism for abrupt Pleistocene climate change, USC Zumberge Research Grant, \$20,179 (PI).

PUBLICATIONS IN REVIEW/REVISION/PRESS

*Student author

†Postdoctoral Scholar Author

- 2017 *Aron, P.G. and **Poulsen, C.J.**, Cenozoic mountain building and climate evolution, Mountains, Climate, and Biodiversity, New York, NY: Wiley Press, in press.
- Fan, M., Feng, R., Geissman, J., and **Poulsen, C.J.**, Global cooling induced diachronous aridification in the Rocky Mountains during the latest Eocene-earliest Oligocene, *Proceedings of the National Academy of Sciences*, in review.
- †Skinner, C.B., **Poulsen, C.J.**, and Mankin, J.S., Amplification of heat extremes by plant CO_2 physiological forcing, *Nature Communications*, in review.

PEER-REVIEWED PUBLICATIONS (84)

h-index: 35

Citations: 3631

Source: Google Scholar

*Student author

†Postdoctoral Scholar Author

- 2017 Garzione, C.N., McQuarrie, N., Perez, N.D., Ehlers, T.A., Beck, S.L., Karr, N., Eichelberger, N., Chapman, A.D., Ward, K.M., Ducea, M.N., Lease, R.O., **Poulsen, C.J.**, Wagner, L.S., Horton, B.K., Saylor, J.E., and Zandt, G. The tectonic evolution of the Central Andean Plateau and geodynamic implications for the growth of plateaus, *Annual Reviews of Earth and Planetary Sciences*, 45, doi:10.1146/annurev-earth-063016-020612, 2017.
- Liu, Z., Tang, Y., Jian, Z., **Poulsen, C.J.**, Welker, J.M., Bowen, G.J., Pacific North American circulation pattern links external forcing and North American hydroclimatic change over the past millennium, *Proceedings of the National Academy of Sciences*, 114, 3340-3345, doi:10.1073/pnas.1618201114, 2017.
- Lunt, D. J., Huber, M., Anagnostou, E., Baatsen, M. L. J., Caballero, R., DeConto, R., Dijkstra, H. A., Donnadieu, Y., Evans, D., Feng, R., Foster, G. L., Gasson, E., von der Heydt, A. S., Hollis, C. J., Inglis, G. N., Jones, S. M., Kiehl, J., Kirtland Turner, S., Korty, R. L., Kozdon, R., Krishnan, S., Ladant, J.-B., Langebroek, P., Lear, C. H., LeGrande, A. N., Littler, K., Markwick, P., Otto-Bliesner, B., Pearson, P., **Poulsen, C. J.**, Salzmann, U., Shields, C., Snell, K., Stürz, M., Super, J., Tabor, C., Tierney, J. E., Tourte, G. J. L., Tripathi, A., Upchurch, G. R., Wade, B. S., Wing, S. L., Winguth, A. M. E., Wright, N. M., Zachos, J. C., and Zeebe, R. E.: The DeepMIP contribution to PMIP4: experimental design for model simulations of the EECO, PETM, and pre-PETM (version 1.0), *Geosci. Model Dev.*, 10, 889-901, doi:10.5194/gmd-10-889-2017, 2017.
- Matheny, A.M., *Fiorella, R.P., Bohrer, G., **Poulsen, C.J.**, Morin, T.H., Wunderlich, A., Vogel, C.S., and Curtis, P.S., Contrasting strategies of hydraulic control in two co-dominant temperate tree species, *Ecohydrology*, 10, 3, doi:10.1002/eco.1815, 2017.
- Wilson, J.P., Montañez, I.P., White, J.D., DiMichele, W.A., McElwain, J.C., **Poulsen, C.J.**, and Hren, M.T., Dynamic Carboniferous tropical forests: new views of plant function and potential for physiological forcing of climate, *New Phytologist*, 32, e1815, doi:10.1111/nph.14400, 2017.
- 2016 *Feng, R., and **Poulsen, C.J.**, Refinement of Eocene lapse rates, fossil-leaf altimetry, and North American Cordillera surface elevation estimates, *Earth and Planetary Science Letters*, doi:10.1016/j.epsl.2015.12.022, 2016.
- *Feng, R., **Poulsen, C.J.**, and Werner, M., Tropical circulation intensification and tectonic extension recorded by Neogene terrestrial $\delta^{18}\text{O}$ records of the western U.S., *Geology*, doi:10.1130/G38212.1, 2016.

- Ghosh, P., Vasiliev, M.V., Ghosh, P., Sarkar, S., Ghosh, S., Yamada, K., Ueno, Y., Yoshida, N., and **Poulsen, C.J.**, Tracking migration of the Indian continent using clumped isotope technique in Phanerozoic soil carbonates, *Nature Scientific Reports*, 6, 22187, doi: 10.1038/srep22187, 2016.
- Li, J., Ehlers, T.A., Mutz, S., Steger, C., Paeth, H., Werner, M., **Poulsen, C.J.**, and ^{*}Feng, R., Modern precipitation $\delta^{18}\text{O}$ and trajectory analysis over the Himalaya-Tibet orogen from ECHAM5-wiso, *Journal of Geophysical Research Atmospheres*, 121, doi:10.1002/2016JD024818, 2016.
- Montañez, I.P., McElwain, J.C., **Poulsen, C.J.**, White, J.D., DiMichele, W.A., Wilson, J.P., Griggs, G., and Michael, H.T., Climate, pCO₂ and terrestrial carbon cycle linkages during late Palaeozoic glacial-interglacial cycles, *Nature Geoscience*, doi:10.1038/NGEO2822, 2016.
- Mutz, S.G., Ehlers, T.A., Li, J., Steger, C., Paeth, H., Werner, M., and **Poulsen, C.J.**, Precipitation $\delta^{18}\text{O}$ over the Himalaya-Tibet orogen from ECHAM5-wiso simulations: Statistical analysis of temperature, topography, and precipitation, *Journal of Geophysical Research Atmospheres*, 121, doi:10.1002/2016JD024856, 2016.
- [†]Petersen, S.V., Tabor, C.R., Lohmann, K.C., **Poulsen, C.J.**, Meyer, K.W., Carpenter, S.J., Matsunaga, K., Smith, S.Y., and Sheldon, N.D., Temperature and salinity of the Late Cretaceous Western Interior Seaway, *Geology*, doi:10.1130/G38311.1, 2016.
- Poulsen, C.J.**, ^{*}Tabor, C.R., and White, J.D., Response to comment on: "Long-term climate forcing by atmospheric oxygen concentrations", *Science*, 353 (6295), 132, doi:10.1126/science.aad8550, 2016.
- [†]Skinner, C.B. and **Poulsen, C.J.**, The role of tropical-extratropical interactions in enhancing Saharan rainfall during the African Humid Period, *Geophysical Research Letters*, 42, doi:10.1002/2015/GL066318, 2016.
- [†]Skinner, C.B., **Poulsen, C.J.**, Chadwick, R., Diffenbaugh, N.S., and Fiorella, R.P., The role of plant CO₂ physiological forcing in shaping future daily-scale precipitation, *Journal of Climate*, doi:10.1175/JCLI-D-16-06031, 2016.
- ^{*}Tabor, C.R. and **Poulsen, C.J.**, Simulating the mid-Pleistocene transition through regolith removal, *Earth and Planetary Science Letters*, 434, 213-240, doi:10.1016/j.epsl.2015.11.034, 2016.
- ^{*}Tabor, C.R., **Poulsen, C.J.**, Lunt, D.J., Rosenbloom, N.A., Otto-Bliesner, B.L., Markwick, P.J., Brady, E.C., and Farnsworth, A., The cause of Late Cretaceous cooling: A multi-model/proxy comparison, *Geology*, doi:10.1130/G38363.1, 2016.
- 2015 ^{*}Fiorella, R.P., **Poulsen, C.J.**, Pillco Zolá, R.S., Barnes, J., ^{*}Tabor, C., and Ehlers, T.A., Spatiotemporal variability of modern precipitation $\delta^{18}\text{O}$ in the Central Andes and implications for paleoclimate and paleoaltimetry estimates, *Journal of Geophysical Research - Atmospheres*, doi: 10.1002/2014JD022893, 2015.
- ^{*}Fiorella, R.P., **Poulsen, C.J.**, Pillco Zolá, R.S., ^{*}Jeffrey, M.L., and Ehlers, T.A., Modern and long-term evaporation of central Andean surface waters suggests paleo archives underestimate Neogene elevations, *Earth and Planetary Science Letters*, doi: 10.1016/j.epsl.2015.09.045, 2015.
- Liu, Z., Jian, Z., Yoshimura, K., Buening, N., **Poulsen, C.J.**, and Bowen, G., Recent contrasting winter temperature changes over North America linked to enhanced positive Pacific North American pattern, *Geophysical Research Letters*, doi:10.1002/2015GL065656, 2015
- Poulsen, C.J.**, ^{*}Tabor, C.R., and White, J.D., Long-term climate forcing by atmospheric oxygen concentrations, *Science*, 348, doi:10.1126/science.1260670, 2015.
- ^{*}Tabor, C.R., **Poulsen, C.J.**, and Pollard, D., How obliquity cycles powered early Pleistocene global ice-volume variability, *Geophysical Research Letters*, doi: 10.1002/2015GL063322, 2015.
- Wilson, J.P., White, J.D., DiMichele, W.A., Hren, M.T., **Poulsen, C.J.**, McElwain, J.C., and Montañez, I.P., Reconstructing extinct plant water use for understanding vegetation-climate feedbacks: Methods, synthesis, and a case study using the Paleozoic-era medullosan seed ferns. *The Paleontological Society Papers*, 21, 167-195, 2015.

- 2014 *Feng, R., and **Poulsen, C.J.**, Andean elevation control on tropical Pacific climate and ENSO, *Paleoceanography*, 29, doi:10.1002/2014PA002640, 2014. – Highlighted article, AGU Research Spotlight, *Eos*.
- *Jeffery, M.L., Yanites, B.J., **Poulsen, C.J.**, and Ehlers, T.A., Vegetation-precipitation controls on Central Andean topography, *Journal of Geophysical Research: Earth Surface*, doi: 10.1002/2013JF002919, 2014.
- *Lowry, D.P., **Poulsen, C.J.**, Horton, D.E., Torsvik, T.H., and Pollard, D., Thresholds for Paleozoic ice sheet initiation, *Geology*, doi: 10.1130/G35615.1, 2014.
- *Tabor, C.R., **Poulsen, C.J.**, and Pollard, D., Mending Milankovitch's Theory: Obliquity amplification by surface feedbacks, *Climates of the Past*, 10, 41-50, 2014.
- 2013 *Feng, R., **Poulsen, C.J.**, Werner, M., Chamberlain, C.P., Mix, H.T., and Mulch, A., Evolution of Early Cenozoic topography, climate, and stable isotopes in precipitation in the North American Cordillera, *American Journal of Science*, 313, 613-648, 2013.
- *Fiorella, R.P. and **Poulsen, C.J.**, Dehumidification over tropical continents reduces climate sensitivity and inhibits snowball Earth initiation, *Journal of Climate*, doi:10.1175/JCLI-D-12-00820.1, 2013.
- *Insel, N., **Poulsen, C.J.**, Sturm, C., and Ehlers, T.A., Climate controls on interannual variability of Andean precipitation $\delta^{18}\text{O}$, *Journal of Geophysical Research: Atmospheres*, 118, 9721-9742, doi:10.1002/jgrd.50619, 2013.
- *Jeffery, M.L., Ehlers, T.A., Yanites, B.J., and **Poulsen, C.J.**, Quantifying the role of paleoclimate and Andean Plateau uplift on river incision, *Journal of Geophysical Research: Earth Surface*, doi:10.1002/jgrf.20055, 2013.
- Montañez, I.P. and **Poulsen, C.J.**, The late Paleozoic ice age: An evolving paradigm, *Annual Reviews of Earth and Planetary Sciences*, 41, 13-33, 2013.
- Poulsen, C.J.** and *Zhou, J., Sensitivity of Arctic climate variability to mean state: Insights from the Cretaceous, *Journal of Climate*, doi:10.1175/JCLI-D-12-00825.1, 2013.
- 2012 Barnes, J.B., Ehlers, T.A., Insel, N., McQuarrie, N., and **Poulsen, C.J.**, Linking orography, climate, exhumation across the central Andes, *Geology*, doi:10.1130/G33229.1, 2012.
- *Herrington, A. and **Poulsen, C.J.**, Terminating the last interglacial: The role of ice sheet-climate feedbacks in a GCM asynchronously coupled to an ice sheet model, *Journal of Climate*, 25, 1871-1882, doi: 10.1175/JCLI-D-11-00218.1, 2012.
- *Horton, D.E., **Poulsen, C.J.**, Montañez, I.P., and DiMichele, W.A., Eccentricity-paced late Paleozoic climate change and its role in cyclostratigraphy, *Palaeogeography, Palaeoclimatology, Palaeoecology*, doi: 10.1016/j.palaeo.2012.03.014, 2012.
- *Insel, N., **Poulsen, C.J.**, Ehlers, T.A., and Sturm, C., Response of meteoric $\delta^{18}\text{O}$ to surface uplift – implications for Cenozoic Andean plateau growth, *Earth and Planetary Science Letters*, 317-318, 262-272, doi:10.1016/j.epsl.2011.11.039, 2012.
- *Jeffery, M.L., **Poulsen, C.J.**, and Ehlers, T.A., Impacts of global cooling, surface uplift and an inland seaway on South American paleoclimate and precipitation $\delta^{18}\text{O}$, *Geological Society of America Bulletin*, 124, 335-351, doi: 10.1130/B30480.1, 2012.
- *Zhou, J., **Poulsen, C.J.**, Rosenbloom, N., Shields, C., and Briegleb, B., Vegetation-climate interactions in the warm mid-Cretaceous, *Climates of the Past*, 8, 565-576, doi:10.5194/cp-8-565-2012, 2012.
- 2011 Flögel, S., Wallmann, K., **Poulsen, C.J.**, *Zhou, J., Oschlies, A., Voigt, S., and Kuhnt, W., Simulating the biogeochemical effects of volcanic CO_2 degassing on the oxygen-state of the deep ocean during the Cenomanian/Turonian Anoxic Event (OAE2), *Earth and Planetary Science Letters*, doi:10.1016/j.epsl.2011.03.018, 2011.
- Poulsen, C.J.** and *Jeffery, M.L., Climate change imprinting on stable isotopic compositions of high-elevation meteoric water, *Geology*, 39, 595-598, doi:10.1130/G32052.12011, 2011.
- 2010 *Horton, D.E., **Poulsen, C.J.**, and Pollard, D., Influence of high-latitude vegetation feedbacks on late Paleozoic glacial cycles, *Nature Geosciences*, doi:10.1038/ngeo922, 2010.
- *Insel, N., Ehlers, T.A., Schaller, M., Barnes, J.B., Tawackoli, S., and **Poulsen, C.J.**, Spatial and temporal variability in denudation across the Bolivian Andes from multiple

- geochronometers, *Geomorphology*, doi:10.1016/j.geomorph.2010.05.014, 2010.
- Poulsen, C.J.**, Ehlers, T.A., and Insel, N., Onset of convective rainfall during gradual late Miocene rise of the central Andes, *Science*, doi: 10.1126/science.1185078, 2010. – Highlighted article, *Nature News*, doi:10.1038/news.2010.166, 2010.
- Tabor, N.J., Smith, R.M., Steyer, S., Sidor, C.A., and **Poulsen, C.J.**, The Permian Moradi Formation of northern Niger: Paleosol morphology, petrography and mineralogy, *Palaeobiology, Palaeoclimatology, Palaeoecology*, doi:10.1016/j.palaeo.2010.11.002, 2010.
- 2009 DiMichele, W.A., Montañez, I.P., **Poulsen, C.J.**, and Tabor, N.J., Vegetation-climate feedbacks and regime shifts in the Late Paleozoic ice age Earth, *Geobiology*, 7(2), 200-226, 2009.
- Ehlers, T.A. and **Poulsen, C.J.**, Influence of Andean uplift on climate and paleoaltimetry estimates, *Earth and Planetary Science Letters*, 281, 238-248, doi:10.1016/j.epsl.2009.02.026, 2009. – Highlighted as Editor's Choice article, *Science*, 324, 857, 2009.
- *Horton, D.E., and **Poulsen, C.J.**, Paradox of late Paleozoic glacioeustasy, *Geology*, 37, 715-718, doi: 10.1130/G30016A.1, 2009.
- *Insel, N., **Poulsen, C.J.**, and Ehlers, T.A., Influence of the Andes Mountains on South American moisture transport, convection, and precipitation, *Climate Dynamics*, doi: 10.1007/s00382-009-0637-1, 2009. – Highlighted article, *Nature Geoscience*, 2, 607, 2009.
- *Lee, S.-Y. and **Poulsen, C.J.**, Obliquity and precessional forcing of continental snow fall and melt: Implications for orbital forcing of Pleistocene ice ages, *Quaternary Science Reviews*, doi: 10.1016/j.quascirev.2009.06.002, 2009.
- You, Y., Huber, M., Müller, D., **Poulsen, C.J.**, and Ribbe, J., Simulation of the Middle Miocene Climate Optimum, *Geophysical Research Letters*, 36, doi:10.1029/2008GL036571, 2009.
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- Bornhorst, T., **Poulsen, C.J.**, Ewing, R.C., 2017, A rescue package for imperiled collection, *Nature*, 546, 210.
- Bornhorst, T. and **Poulsen, C.J.**, 2015, Michigan Mineral Alliance, *Rocks & Minerals*, 90, 450-453, doi:10.1080/00357529.2015.1059093.
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- Poulsen, C.J.**, Modelling of Paleo-Climates, In *Encyclopedia of Global Warming and Climate Change*, Philander, S.G., and Golson, G.J. (Eds.), Sage Publications, 1552 p., 2008.
- Poulsen, C.J.**, Paleoclimate modeling, Pre-Quaternary, In *Encyclopedia of Paleoclimatology and Ancient Environments*, Gornitz, V. (Ed.), Kluwer Academic Publishers, 1049 p., 2008.

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- Poulsen, C.J., Snowball Fight, *American Scientist*, 91, 2003.
- Poulsen, C.J., Interpreting Pre-Quaternary Climate from the Geological Record by J.T. Parrish, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 198, 423-424, 2003.

CONFERENCE ABSTRACTS (PREVIOUS 5 YEARS)

*Student author †Postdoctoral Scholar Author

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- Fan, M., Feng, R., Geissman, J.W., and **Poulsen, C.J.**, Global cooling induced diachronous aridification in the Rocky Mountains during the Latest Eocene-Earliest Oligocene, Geological Society of America Abstracts with Programs, v. 48, no. 7, Paper No. 285312, 25-28 Sep., 2016.
- *Fiorella, R., **Poulsen, C.J.**, Matheny, A.M., Sanchez, C.R., Fotis, A.T., Morin, T.H., Vogel, C.S., Gough, C.M., Aron, P., and Bohrer, G., Forest canopy water cycling responses to an intermediate disturbance revealed through stable water isotopes, Abstract H31E-1446 presented at 2016 Fall Meeting, AGU, San Francisco, CA, 12-16 Dec., 2016.
- Liu, Z., Tang, Y., Jian, Z., **Poulsen, C.J.**, and Bowen, G.J., A multi-proxy reconstruction of the winter Pacific North American Variability over the past millennium, Abstract PP51A-2290 presented at 2016 Fall Meeting, AGU, San Francisco, CA, 12-16 Dec., 2016.
- Lynch, B., Yanites, B., *Shen, H., and **Poulsen, C.J.**, Modeling landscape evolution and climate: How erosion and precipitation are linked in active orogens, Abstract EP43A-0942 presented at 2016 Fall Meeting, AGU, San Francisco, CA, 12-16 Dec., 2016.
- Montañez, I.P., White, J.D., Wilson, J.P., McElwain, J.C., DiMichele, W., **Poulsen, C.J.**, Hren, M.T., Dynamic Carboniferous tropical forests: a new view of their paleo-plant

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 - † Skinner, C., and **Poulsen, C.J.**, Amplification of heat extremes by CO_2 physiological forcing, Abstract A11F-0087 presented at 2016 Fall Meeting, AGU, San Francisco, CA, 12-16 Dec., 2016.
 - Poulsen, C.J.** and Tabor, C., Late Cretaceous climate evolution from a modeling perspective, Geological Society of America Abstracts with Programs, v. 48, no. 7, Paper No. 282171, 25-28 Sep., 2016. (invited)
 - * Tabor, C., Bardeen, C., Otto-Bliesner, B., Garcia, R., Toon, B., and **Poulsen, C.J.**, Simulating the K-Pg with an Earth System Model, Geological Society of America Abstracts with Programs, v. 48, no. 7, Paper No. 279839, 25-28 Sep., 2016.
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 - White, J.D., **Poulsen, C.J.**, Montanez, I.P., McElwain, J., Wilson, J.P., and Hren, M.T., Polar ice sheets drive paleohydroclimate affecting terrestrial plant distribution and CO_2 exchange potential during the Upper Carboniferous, Abstract PP41F-08 presented at 2016 Fall Meeting, AGU, San Francisco, CA, 12-16 Dec., 2016.
 - Wilson, J.P., Montanez, I.P., White, J., McElwain, J.C., DiMichele, W., **Poulsen, C.J.**, and Hren, M., Structure and function in dynamic Carboniferous tropical forests: A new perspective on Paleozoic plant function and physiological forcing of climate, Geological Society of America Abstracts with Programs, v. 48, no. 7, Paper No. 285338, 25-28 Sep., 2016.
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 - † Petersen, S.V., Tabor, C.R., Carpenter, S.J., Meyer, K.W., Lohmann, K.C., and **Poulsen, C.J.**, A fresh look: Salinity and temperature of the Western Interior Seaway using the clumped isotope paleothermometer, Geological Society of America Abstracts with Programs, v. 47, no. 7, 1-4 Nov., 2015.
 - † Petersen, S., Tabor, C., Meyer, K., Lohmann, K., and **Poulsen, C.J.**, Equator to pole in the Cretaceous: A comparison of clumped isotope data and CESM model runs, Abstract PP42A-07 presented at 2015 Fall Meeting, AGU, San Francisco, CA, 14-18 Dec.
 - † Skinner, C. and **Poulsen C.J.**, The role of CO_2 physiological forcing in driving future precipitation variability and precipitation extremes, Abstract GC231-1208 presented at 2015 Fall Meeting, AGU, San Francisco, CA, 14-18 Dec.
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- *Fiorella, R.P., **Poulsen, C.J.**, Pillco-Zola, R.S., *Jeffery, M.L., and Ehlers, T.A., Incorporating evaporation histories into paleoaltimetry reconstructions: An Andean case study, Geological Society of America Abstracts with Programs, v. 46, no. 6, 19-22 Oct., 2014.
- Li, J., Ehlers, T.A., Mutz, S., Steger, C., Paeth, H., **Poulsen, C.J.**, Werner, M., Modern and paleoclimate variations over the Tibetan Plateau from climate modeling, Abstract EGU2014-11696 presented at 2014 EGU General Assembly, AGU, Vienna, Austria.
- Li, J., Ehlers, T.A., Werner, M., Mutz, S., Steger, C., Paeth, H., **Poulsen, C.J.**, and *Feng, R., Late Quaternary climate and precipitation $\delta^{18}\text{O}$ variations over the Tibetan Plateau from paleoclimate modeling, Abstract GC43C-0762 presented at 2014 AGU, San Francisco, 15-19 Dec.
- Lunt, D., Otto-Bliesner, **Poulsen, C.J.**, Rosenbloom, N., and *Tabor, C. The “pre-Pliocene” PMIP working group—results so far, and questions for discussion, PMIP3 Second General Meeting, Namur, Belgium, 25-20 May.
- Montañez, I.P., Dimichele, W., Hren, M.T., McElwain, J., **Poulsen, C.J.**, White, J.D., and Wilson, J.P., Resolving vegetation-CO₂-climate feedbacks during the last icehouse—an ELT collaborative approach, Geological Society of America Abstracts with Programs, v. 46, no. 6, 19-22 Oct., 2014.
- Poulsen, C.J.**, *Feng, R., and *Fiorella, R., The role of topography on continental water cycling and water stable isotope compositions over geological time scales, Abstract PP33F-01 presented at 2014 AGU, San Francisco, 15-19 Dec.
- Rosenbloom, N., Otto-Bliesner, B., Brady, E., Lunt, D., **Poulsen, C.J.**, and *Tabor, C. CESM for Deep Time Paleoclimate, PMIP3 Second General Meeting, Namur, Belgium, 25-20 May.
- *Skinner, C.B., and **Poulsen, C.J.**, The role of regional atmospheric circulation in shaping abrupt climate reorganization in Africa, Abstract PP43A-1452 presented at 2014 AGU, San Francisco, 15-19 Dec.
- *Tabor, C., **Poulsen, C.J.**, and Pollard, D., The potential role of regolith in the mid-Pleistocene transition, Abstract PP33C-1263 presented at 2014 AGU, San Francisco, 15-19 Dec.
- 2013 *Feng, R., **Poulsen, C.J.**, Dissipation of El Niño-like conditions through Andean uplift, Abstract PP34A-04 presented at 2013 Fall Meeting, AGU, San Francisco, CA, 9-13 Dec.
- *Fiorella, R., **Poulsen, C.J.**, Paleogeographic controls on climate sensitivity and feedback strength and their impacts on snowball Earth initiation, Abstract A21B-0018 presented at 2013 Fall Meeting, AGU, San Francisco, CA, 9-13 Dec.
- Lowry, D.P., Horton, D.E., **Poulsen, C.J.**, Pollard, D., Torsvik, T.H., Controls on ice sheet initiation during the Paleozoic, Geological Society of America Abstracts with Programs, v. 45, no. 7, 27-30 Oct.
- Montañez, I.P., **Poulsen, C.J.**, Climate response to CO₂ forcing in a paleo-icehouse, STRATA, 2013 série 1, vol. 14. Pre-Cenozoic Climate Workshop, Toulouse, France, 17-19 Jun.
- Montañez, I.P., **Poulsen, C.J.**, Climate of the Late Paleozoic—Earth’s last icehouse and icehouse collapse II, Geological Society of America Abstracts with Programs, v. 45, no. 7, 27-30 Oct.
- Poulsen, C.J.**, *Fiorella, R., Climate sensitivity in the pre-Cenozoic world, STRATA, 2013 série 1, vol. 14. Pre-Cenozoic Climate Workshop, Toulouse, France, 17-19 Jun.
- *Tabor, C.R., **Poulsen, C.J.**, Replicating the ice-volume signal of the Early Pleistocene with a complex Earth system model, Abstract C33A-0686 presented at 2013 Fall Meeting, AGU, San Francisco, CA, 9-13 Dec.
- 2012 *Feng, R., **Poulsen, C.J.**, and Werner, M., Reconstructing early Cenozoic topography of

the North American Cordillera from authigenic mineral $\delta^{18}\text{O}$ —Moving beyond Rayleigh distillation, Abstract T33B-2653 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

*Fiorella, R., **Poulsen, C.J.**, Ehlers, T.A., *Jeffery, M.L., Pilco Zola, R.S., Exceptional isotopic variability in stream waters of the Central Andes: Large-scale or local controls? Abstract B32A-07 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

Floegel, S., Oschlies, A., **Poulsen, C.J.**, and Wallmann, K.J., Biogeochemical cycling during Late Cretaceous OAE2, Abstract PP31A-2004 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.

*Jeffery, M.L., **Poulsen, C.J.**, Ehlers, T.A., and Yanites, B.J., Precipitation intensity and vegetation controls on geomorphology of the central Andes, Abstract GC22C-07 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

Garziona, C.N., **Poulsen, C.J.**, McQuarrie, N., and Ehlers, T.A., Measuring vertical motions of the Earth's surface on long time scales through integration of surface uplift proxies with climate modeling, Abstract T231-05 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

*Tabor, C., **Poulsen, C.J.**, and Pollard, D., Modeling North American ice sheet response to changes in precession and obliquity, Abstract C53A-0822 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

Total conference abstracts as of January 2017 is approximately 116.

COURSES TAUGHT (WHILE AT THE UNIVERSITY OF MICHIGAN)

Semester	Course	Title	Credit	Enroll	Q1 [†]	Q2 [†]
2017s	EARTH 202*	Environ Science in the Rockies	5	20	5.00	5.00
2016s	EARTH 202*	Environ Science in the Rockies	5	19	4.01	4.79
2016w	EARTH 331	Climate and Climate Change	4	61	4.31	4.52
2015s	EARTH 202*	Environ Science in the Rockies	5	15	4.19	4.64
2015w	EARTH 331	Climate and Climate Change	4	53	4.20	4.68
2014s	EARTH 202*	Environ Science in the Rockies	4	8	4.92	5.00
2014w	EARTH 331	Climate and Climate Change	4	49	4.75	4.85
2013f	EARTH 114	Global Warming	1	84	4.22	4.78
2013s	EARTH 202*	Environ Science in the Rockies	4	9	4.88	5.00
2013w	EARTH 331	Climate and Climate Change	4	34	3.73	4.36
2012f	EARTH 114	Global Warming	1	226	3.91	4.61
2012s	EARTH 202*	Environ Science in the Rockies	4	15	4.73	4.87
2012w	EARTH 331	Climate and Climate Change	4	39	4.00	4.64
2011f	GS 114 (02)	Global Warming	1	193	3.94	4.61
	ENVIRON 110*	Intro to Global Change	4(2)	127	4.09	4.62
2011s	GS 202*	Environ Science in the Rockies	4	18	4.75	4.90
2011w	GS 114 (01)	Global Warming	1	282	4.26	4.67
2010f	ENVIRON 110*	Intro to Global Change	4(2)	110	3.88	4.35
	GS 114 (02)	Global Warming	1	192	4.12	4.56
2009s	GS 116*	Intro Geology in the Rockies	6(6)	10	5.00	5.00
2009w	GS 114 (01)	Global Warming	1	230	4.15	4.78
	GS 114 (02)	Global Warming	1	107	3.90	4.26
2008f	ENVIRON 110*	Intro to Global Change	4(2)	159	4.05	4.72
	AOSS 410	Earth System Modeling	4	13	4.00	4.00
2008s	GS 116*	Intro Geology in the Rockies	6(6)	18	4.86	4.75
2008w	AOSS 321*	Earth System Dynamics	4(2)	27	3.58	3.81
2007s	GS 116*	Intro Geology in the Rockies	6(6)	20	4.88	4.97
2007w	GS 114 (01)	Global Warming	1	116	4.19	4.53
	GS 114 (11)	Global Warming	1	219	4.17	4.57

2006f	AOSS 410 [*]	Earth System Modeling	4(2)	25	3.79	3.85
	GS 114 (01)	Global Warming	1	92	4.25	4.58
	GS 114 (02)	Global Warming	1	135	3.98	4.30
2006w	GS 151	Ice Ages	4	18	4.27	4.97
	GS 111	Climate and Human History	1	220	4.04	4.40
2005f	AOSS 410	Earth System Modeling	4	19	3.50	4.36
2005s	GS 116 [*]	Intro Geology in the Rockies	6	21	4.29	4.21
2005w	GS 111	Climate and Human History	1	260	4.00	4.35
2004f	AOSS 410 [*]	Earth System Modeling	4(2)	18	3.79	4.75
2004s	GS 116 [*]	Intro Geology in the Rockies	6(2)	10	NS	NS
2004w	GS 446	Principles of Paleoclimatology	4	10	3.00	3.25

[†]Q1: quality of course, Q2: quality of instructor

^{*}Indicates co-taught course; credit responsibility indicated in ().

GRADUATE STUDENT SUPERVISION (* INDICATES CO-ADVISED STUDENT)

CURRENT STUDENTS (5 PHD STUDENTS)

2016-pres Sophia Macarewich, pre-candidate
 2016-pres Alexander Thompson, pre-candidate
 2016-pres Andrew Vande Guchte, pre-candidate
 2015-pres Phoebe Aron, Ph.D., candidate
 2014-pres Hong Shen, Ph.D., candidate

PAST STUDENTS (7 MS, 8 PHD STUDENTS GRADUATED)

2010-2016 Richard Fiorella, Ph.D.
 2010-2015 Clay Tabor, Ph.D.
 2010-2015 Ran Feng, Ph.D.
 2012-2014 Daniel Lowry, M.S.
 2008-2012 ^{*}Louise Jeffery, Ph.D.
 2006-2012 Jing Zhou, Ph.D.
 2006-2011 Daniel Horton, Ph.D.
 2009-2011 Adam Herrington, M.S.
 2005-2010 Nadja Insel, Ph.D.
 2010 ^{*}Stephanie Olen, M.S.
 2005-2006 Cheryl Peyser, M.S.
 2003-2008 Shih-Yu Lee, Ph.D.
 2003-2005 ^{*}Paola Gomez, M.S. (USC)
 2002-2004 Thomas M. Foster, M.S.
 2001-2004 Tran T. Huynh, M.S.

MEMBER PH.D. THESIS COMMITTEE (YEAR COMPLETED, DEPARTMENT IF OTHER THAN ESS)

Jason Barnes (2008), Yang Chen (2006, AOSS), Huiwen Chuang (2012, AOSS), Matthew Domeier (2011), Xiaojing Du (in progress), Franek Hasiuk (2008), Noralynn Hasshold (2006), Karla Knudson (2009), Conrad Luecke (in progress), Tiffany Napier (in progress), Alexandre Pohl (2016, Laboratoire des Sciences du Climat et de l'environnement, Gif-sur-Yvette, France). Kevin Reed (2012, AOSS), Deepak Singh (2016, CLaSP), Ahmed Tawfik (2012, AOSS), Allyson Tessin (2016), Lindsey Waddell (2008), Minghuai Wang (2009, AOSS), David Whipp (2008), Ian Winkelstern (2016), Li Xu (2011, AOSS).

MEMBER PRELIMINARY EXAM COMMITTEE (YEAR COMPLETED)

Jason Barnes (2004), Xiaojing Du (2016), Allison Duval (2007), Ran Feng (2011), Richard Fiorella (2012), Franek Hasiuk (2008), Daniel Horton (2008), Nadja Insel (2009), Louise Jeffery (2009), Shih-Yu Lee (2004), Daniel Lowry (2014), Hong Shen (2016), Clay Tabor (2012), Chana Tilevitz (2015), Allyson Tessin (2013), Ian Winkelstern (2013), Jing Zhou (2008).

POSTDOCTORAL FELLOW SUPERVISION

- 2017- Dr. Jiang Zhu
- 2014-2017 Dr. Christopher Skinner, Turner Postdoctoral Scholar
- 2014-2016 Dr. Sierra Petersen, National Science Foundation Postdoctoral Fellow
- 2007-2009 Dr. Heather Hill, Turner Postdoctoral Scholar
- 2002 Dr. Matthew Kirby

UNDERGRADUATE SUPERVISION

Supervised 5 undergraduate thesis (Athena Eyster, 2010, UM; Sean DuBois, 2011; Bethan Harris, 2005, University of London; Andrew Gendazsek, 2002, Carleton College; Alex Thompson, 2015, UM), 3 UROP students (Caroline Crawford, 2006; Colene Hafke, 2005-2006; William Turner III, 2004-2005), and 9 undergraduate work-study students (Laura McQuarter, 2017; Ariana Wilson, 2016-2017; Cristina Shoffner, 2015-2016; Alex Thompson, 2013-2015; Lawrence Garber, 2011-2012; Athena Eyster, 2009; Kan Yang, 2005-2006; David Reed, 2004-2005, Jessica Bleha, 2004).

OTHER PROFESSIONAL ACTIVITIES

- 2016 Member, DeepMIP Organizational Meeting, National Center for Atmospheric Research, Boulder, CO.
- 2014 Co-chair, "Climate change in the geologic record", GSA, Vancouver, BC.
- 2013 Invited participant, Workshop on Exploring the Cretaceous Greenhouse through Scientific Drilling, London, UK.
- 2012 International Advisory Board member, Himalaya-Karakorum-Tibet and International Symposium on Tibetan Plateau, Tubingen, Germany.
- 2010 Invited participant, Grand Challenges in Sedimentary Geology and Paleobiology Workshop, Tahoe Center for Environmental Research, Lake Tahoe NV/CA.
- 2008 Panelist, Nation Research Council meeting on Deep-Time Paleoclimate, Irvine, California.
- 2006 Co-chair, "Plio-Pleistocene evolution of the tropical ocean: causes and consequences", AGU, San Francisco, CA.
- 2005 Coordinator of NCAR Paleo-Working Group project to develop community-organized Cretaceous climate simulations.
- 2004 Invited participant, NSF Workshop on Deep-Time GeoSystems, Washington D.C.
- 2004 Co-chair, "Extreme environments of the Precambrian Earth", AGU, Montreal, Canada.
- 2002 Co-chair, "Cretaceous Atmosphere and Ocean Dynamics", Cretaceous Climate and Ocean Dynamics, Florissant, CO.

Reviewed manuscripts, book chapters, and proposals for: *American Journal of Science*; *Climate Dynamics*; *Climates of the Past*; *Cretaceous Research*; *Earth and Planetary Science Letters*; *Earth-Science Reviews*; *EOS*; *Geochemistry, Geophysics, and Geosystems*; *Geochimica et Cosmochimica Acta*; *Geology*; *Geological Society of America Bulletin*; *Geomorphology*; *Geophysical Research Letters*; *Geosphere*; *Global Planetary Change*; *Gondwana Research*; *Journal of Climate*; *Journal of Geophysical Research–Atmospheres*; *Journal of Sedimentary Research*; *Meteorologische Zeitschrift*; *Nature*; *Nature Communications*; *Nature Geoscience*; *Nature Scientific Reports*; *Palaeogeography, Palaeoclimatology, Palaeoecology*; *Palaeontologia Electronica*; *Paleoceanography*; *Proceedings of the National Academy of Sciences*; *Science*; *Science Advances*; *Scientific Reports*; *Sedimentary Geology*; *Treatise on Geochemistry*; AAS; AGU Special Publications; Austrian Funds of Science (Der Wissenschaftsfonds); Cambridge University Press; Geological Society of London; German Research Foundation (*Deutsche Forschungsgemeinschaft*); InTeGrate Program; National Geographic Society; NSF; ODP; Prentice Hall; Quest.

OUTREACH/PUBLIC SERVICE

- 2017 Invited Speaker, Royal Oak Environmental Advisory Board, Royal Oak, MI.
- 2017 Invited Speaker, Science Café, Museum of Natural History, UM.

2017 Panelist, "This Changes Everything" film screening and discussion, UM.
2014 Invited Speaker, Geologists of Jackson Hole, Jackson, MI.
2014 Invited Speaker, Earth Day: Climate Action!, Brighton, MI.
2013 Panelist, Sierra Club Round-table Discussion on Climate Action, Ann Arbor, MI.
2013 Invited Speaker, Organizing for Action Forum on Climate Change, Dexter, MI.
2012, 2013 Judge, Forsythe Middle School Science Fair, Ann Arbor, MI.