

**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

**RESEARCH INTERESTS**

Climate dynamics, paleoclimatology, earth system modeling, climate change, climate variability, climate-ecosystem interactions, water isotopes, ecohydrology, climate-mountain interactions, paleoaltimetry.

**HONORS/AWARDS**

2017 Fellow of the American Association for the Advancement of Science  
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  
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 POSITIONS**

2013-2021 Associate Editor, *American Journal of Science*  
2017-2020 Associate Editor, *Paleoceanography*  
2017 Guest Editor, *Proceedings of the National Academy of Sciences*.

### **REVIEW PANELS/ADVISORY COMMITTEES**

- 2017 External Reviewer, Dept of Biodiversity, Earth and Environmental Science, Drexel University, Philadelphia, PA
- 2014-2017 Member, CISL High Performance Computing Allocation Panel (CHAP)
- 2012 International Advisory Board member, Himalaya-Karakorum-Tibet and International Symposium on Tibetan Plateau, Tübingen, Germany
- 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 Paleooceanography/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)

### **SYMPOSIA CONVENED/WORKSHOP PARTICIPATION**

- 2018 Invited participant, Earth Temperature History Symposium, Smithsonian Institution, Washington D.C.
- 2017-2018 Member, Organizing Committee for Paleoclimate Theme, Goldschmidt 2018
- 2016, Member, USCS Paleo Climate Workshop, Santa Cruz, CA
- 2016 Member, DeepMIP Organizational Meeting, National Center for Atmospheric Research, Boulder, CO
- 2014-2017 Member, Organizing Committee for NSF-sponsored US-Taiwan workshop on "Feedbacks and Coupling among Mountain Building, Surface Processes, and Climate"
- 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
- 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

### **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)
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
- 2001 Innovative Teaching Award (\$3000), University of Southern California

**RESEARCH COMPUTING AWARDS**

- 2018-2019 Renewal: Sources and circulation of intermediate and deep waters in the  
Late Cretaceous, NCAR CISL Computer Allocation UMIC0018 (400,000  
core hrs) on Cheyenne.
- 2018-2019 Simulating Cenozoic paleoclimate using iCESM1.2 to constrain Andean  
paleotopography, NCAR CISL Computer Allocation UMIC0054 (400,000  
core hrs) on Cheyenne.
- 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 UMIC0047

- (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 UMIC0018 (4,400,000 core hrs) on Yellowstone.
- 2014-2015 Simulation of CO<sub>2</sub>-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, NCAR CISL Computer Allocation (200,000 core hrs) on Yellowstone.
- 2012-2013 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 Collaborative Research: Paleoenvironmental change and the growth of the Central Andes, \$745,043, \$299,164 to Levin/Poulsen (co-PI).

#### **RESEARCH GRANTS (18, \$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<sub>2</sub>-Climate-Vegetation Feedbacks in a Dynamic Paleoeicehouse, 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

\*Student author

†Postdoctoral Scholar Author

- 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.
- \*Fiorella, R.P., Poulsen, C.J., Matheny, A.M., and Bohrer, G., Seasonal patterns of water vapor cycling in a deep, continental mountain valley from stable water vapor isotopes, *Journal of Geophysical Research—Atmospheres*, in review.
- Liu, Z., Jian, Z., Poulsen, C.J., and Zhao, L., Coral  $\delta^{18}\text{O}$  constraints on Pacific Walker circulation variability since 1886, *Geophysical Research Letters*, in review.

#### PEER-REVIEWED PUBLICATIONS (86)

h-index: 35

Citations: 3963

Source: Google Scholar

\*Student author

†Postdoctoral Scholar Author

86. \*Aron, P.G. and Poulsen, C.J. (2018). Cenozoic mountain building and climate evolution, Mountains, Climate, and Biodiversity, New York, NY: Wiley Press.
85. †Skinner, C.B., Poulsen, C.J., and Mankin, J.S. (2018). Amplification of heat extremes by plant CO<sub>2</sub> physiological forcing, *Nature Communications*, in press.
84. 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. (2017). The tectonic evolution of the Central Andean Plateau and geodynamic implications for the growth of plateaus, *Annual Reviews of Earth and Planetary Sciences*, 45, 529-559,

doi:10.1146/annurev-earth-063016-020612.

83. Liu, Z., Tang, Y., Jian, Z., Poulsen, C.J., Welker, J.M., Bowen, G.J. (2017). 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.
82. 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., Stärz, 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. (2017). 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.
81. Matheny, A.M., <sup>\*</sup>Fiorella, R.P., Bohrer, G., Poulsen, C.J., Morin, T.H., Wunderlich, A., Vogel, C.S., and Curtis, P.S. (2017). Contrasting strategies of hydraulic control in two co-dominate temperate tree species, *Ecohydrology*, 10, 3, doi:10.1002/eco.1815.
80. <sup>†</sup>Skinner, C.B., Poulsen, C.J., Chadwick, R., Diffenbaugh, N.S., and Fiorella, R.P. (2017). The role of plant CO<sub>2</sub> physiological forcing in shaping future daily-scale precipitation, *Journal of Climate*, 30, 2319-2340, doi:10.1175/JCLI-D-16-06031.
79. Wilson, J.P., Montañez, I.P., White, J.D., DiMichele, W.A., McElwain, J.C., Poulsen, C.J., and Hren, M.T. (2017). 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.
78. <sup>\*</sup>Feng, R., and Poulsen, C.J. (2016). Refinement of Eocene lapse rates, fossil-leaf altimetry, and North American Cordillera surface elevation estimates, *Earth and Planetary Science Letters*, 436, 130-141, doi:10.1016/j.epsl.2015.12.022.
77. <sup>\*</sup>Feng, R., Poulsen, C.J., and Werner, M. (2016). Tropical circulation intensification and tectonic extension recorded by Neogene terrestrial  $\delta^{18}\text{O}$  records of the western U.S., *Geology*, 44, 971-974, doi:10.1130/G38212.1.
76. Ghosh, P., Vasiliev, M.V., Ghosh, P., Sarkar, S., Ghosh, S., Yamada, K., Ueno, Y., Yoshida, N., and Poulsen, C.J. (2016). Tracking migration of the Indian continent using clumped isotope technique in Phanerozoic soil carbonates, *Nature Scientific Reports*, 6, 22187, doi: 10.1038/srep22187.
75. Li, J., Ehlers, T.A, Mutz, S., Steger, C., Paeth, H., Werner, M., Poulsen, C.J., and <sup>\*</sup>Feng, R. (2016). 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.
74. Montañez, I.P., McElwain, J.C., Poulsen, C.J., White, J.D., DiMichele, W.A., Wilson, J.P., Griggs, G., and Michael, H.T. (2016). Climate, pCO<sub>2</sub> and terrestrial carbon cycle linkages during late Palaeozoic glacial-interglacial cycles, *Nature Geoscience*, doi:10.1038/NGEO2822.
73. Mutz, S.G., Ehlers, T.A., Li, J., Steger, C., Paeth, H., Werner, M., and Poulsen, C.J. (2016). 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.
72. <sup>†</sup>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. (2016). Temperature and salinity of the Late Cretaceous Western Interior Seaway, *Geology*,

doi:10.1130/G38311.1.

71. Poulsen, C.J., Tabor, C.R., and White, J.D. (2016). Response to comment on: Long-term climate forcing by atmospheric oxygen concentrations”, *Science*, 353 (6295), 132, doi:10.1126/science.aad8550.
70. Skinner, C.B. and Poulsen, C.J. (2016). The role of tropical-extratropical interactions in enhancing Saharan rainfall during the African Humid Period, *Geophysical Research Letters*, 42, doi:10.1002/2015/GL066318.
69. Tabor, C.R. and Poulsen, C.J. (2016). Simulating the mid-Pleistocene transition through regolith removal, *Earth and Planetary Science Letters*, 434, 213-240, doi:10.1016/j.epsl.2015.11.034.
68. 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. (2016). The cause of Late Cretaceous cooling: A multi-model/proxy comparison, *Geology*, 44, 963-966, doi:10.1130/G38363.1.
67. Fiorella, R.P., Poulsen, C.J., Pillco Zolá, R.S., Barnes, J., Tabor, C., and Ehlers, T.A. (2015). 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*, 120, 4630-4656, doi: 10.1002/2014JD022893.
66. Fiorella, R.P., Poulsen, C.J., Pillco Zolá, R.S., Jeffrey, M.L., and Ehlers, T.A., (2015). Modern and long-term evaporation of central Andean surface waters suggests paleo archives underestimate Neogene elevations, *Earth and Planetary Science Letters*, 432, 59-72, doi: 10.1016/j.epsl.2015.09.045.
65. Liu, Z., Jian, Z., Yoshimura, K., Buening, N., Poulsen, C.J., and Bowen, G. (2015). Recent contrasting winter temperature changes over North America linked to enhanced positive Pacific North American pattern, *Geophysical Research Letters*, 42, 7750-7757, doi:10.1002/2015GL065656.
64. Poulsen, C.J., Tabor, C.R., and White, J.D., (2015). Long-term climate forcing by atmospheric oxygen concentrations, *Science*, 348, 1238-1241, doi:10.1126/science.1260670.
63. Tabor, C.R., Poulsen, C.J., and Pollard, D. (2015). How obliquity cycles powered early Pleistocene global ice-volume variability, *Geophysical Research Letters*, doi: 10.1002/2015GL063322.
62. Wilson, J.P., White, J.D., DiMichele, W.A., Hren, M.T., Poulsen, C.J., McElwain, J.C., and Montañez, I.P. (2015). 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.
61. Feng, R., and Poulsen, C.J. (2014). Andean elevation control on tropical Pacific climate and ENSO, *Paleoceanography*, 29, doi:10.1002/2014PA002640. – Highlighted article, AGU Research Spotlight, *Eos*.
60. Jeffrey, M.L., Yanites, B.J., Poulsen, C.J., and Ehlers, T.A. (2014) Vegetation-precipitation controls on Central Andean topography, *Journal of Geophysical Research: Earth Surface*, 119, 1354-1375, doi:10.1002/2013JF002919.
59. Lowry, D.P., Poulsen, C.J., Horton, D.E., Torsvik, T.H., and Pollard, D. (2014). Thresholds for Paleozoic ice sheet initiation, *Geology*, 42, 627-630, doi: 10.1130/G35615.1.
58. Tabor, C.R., Poulsen, C.J., and Pollard, D. (2014). Mending Milankovitch’s Theory: Obliquity amplification by surface feedbacks, *Climates of the Past*, 10, 41-50.
57. Feng, R., Poulsen, C.J., Werner, M., Chamberlain, C.P., Mix, H.T., and Mulch, A. (2013). Evolution of Early Cenozoic topography, climate, and stable isotopes in



- precipitation in the North American Cordillera, *American Journal of Science*, 313, 613-648.
56. \*Fiorella, R.P. and Poulsen, C.J. (2013). Dehumidification over tropical continents reduces climate sensitivity and inhibits snowball Earth initiation, *Journal of Climate*, 26, 9677-9695, doi:10.1175/JCLI-D-12-00820.1.
  55. \*Insel, N., Poulsen, C.J., Sturm, C., and Ehlers, T.A. (2013). 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.
  54. \*Jeffery, M.L., Ehlers, T.A., Yanites, B.J., and Poulsen, C.J. (2013). Quantifying the role of paleoclimate and Andean Plateau uplift on river incision, *Journal of Geophysical Research: Earth Surface*, doi:10.1002/jgrf.20055.
  53. Montañez, I.P. and Poulsen, C.J. (2013). The late Paleozoic ice age: An evolving paradigm, *Annual Reviews of Earth and Planetary Sciences*, 41, 13-33.
  52. Poulsen, C.J. and Zhou, J. (2013). Sensitivity of Arctic climate variability to mean state: Insights from the Cretaceous, *Journal of Climate*, 26, 7003-7022, doi:10.1175/JCLI-D-12-00825.1.
  51. Barnes, J.B., Ehlers, T.A., Insel, N., McQuarrie, N., and Poulsen, C.J. (2012). Linking orography, climate, exhumation across the central Andes, *Geology*, 40, 1135-1138, doi:10.1130/G33229.1.
  50. \*Herrington, A. and Poulsen, C.J. (2012). 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.
  49. \*Horton, D.E., Poulsen, C.J., Montañez, I.P., and DiMichele, W.A. (2012). Eccentricity-paced late Paleozoic climate change and its role in cyclostratigraphy, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 331, 150-161, doi: 10.1016/j.palaeo.2012.03.014.
  48. \*Insel, N., Poulsen, C.J., Ehlers, T.A., and Sturm, C. (2012). 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.
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#### **CONFERENCE ABSTRACTS (PREVIOUS 5 YEARS, 2013-2017)**

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- Montañez, I.P. and Poulsen, C.J. (2013). Climate response to CO<sub>2</sub> forcing in a paleo-icehouse, STRATA, 2013 série 1, vol. 14. Pre-Cenozoic Climate Workshop, Toulouse, France, 17-19 Jun.
- Montañez, I.P. and Poulsen, C.J. (2013). 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. and \*Fiorella, R. (2013). Climate sensitivity in the pre-Cenozoic world, STRATA, 2013 série 1, vol. 14. Pre-Cenozoic Climate Workshop, Toulouse, France, 17-19 Jun. (invited)
- \*Tabor, C.R. and Poulsen, C.J. (2013). 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.

Total conference abstracts as of December 2017 is approximately 126.

#### **COURSES TAUGHT (WHILE AT THE UNIVERSITY OF MICHIGAN)**

<b>Semester</b>	<b>Course</b>	<b>Title</b>	<b>Credit</b>	<b>Enroll</b>	<b>Q1<sup>†</sup></b>	<b>Q2<sup>†</sup></b>
2017f	EARTH 114-01	Global Warming	1	137	3.58	4.19
2017f	EARTH 114-01	Global Warming	1	118	3.88	4.59
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 114-01	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; on 5-point scale

\*Indicates co-taught course; credit responsibility indicated in ().

### 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
2002-2003	Dr. Matthew Kirby

### GRADUATE STUDENT SUPERVISION (\* INDICATES CO-ADVISED STUDENT)

#### CURRENT STUDENTS (5 PHD STUDENTS)

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

#### PAST STUDENTS (7 MS, 8 PHD STUDENTS GRADUATED)

2013-2017	Chana Tilevitz
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), Brigid Lynch (in progress, Indiana University), Tiffany Napier (2017), 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 QUALIFYING EXAM COMMITTEE (YEAR COMPLETED)**

Phoebe Aron (2017), 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), Brigid Lynch (Indiana University, 2018) Daniel Lowry (2014), Sophia Macarewich (2018), Hong Shen (2016), Clay Tabor (2012), Chana Tilevitz (2015), Allyson Tessin (2013), Alexander Thompson (2018), Andrew Vande Guchte (2017), Ian Winkelstern (2013), Jing Zhou (2008).

#### **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), 4 UROP students (Katherine Lerond, 2017; 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 ACTIVITY**

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*; *Geological Magazine*; *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*); Graduate Women in Science; InTeGrate Program; National Geographic Society; National Science Foundation; Ocean Drilling Program; 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.