**Curriculum Vitae**

**Gerard H. Roe**
**Associate Professor,**
**Dept. of Earth and Space Sciences,**
**University of Washington.**

## ADDRESS

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## EDUCATION

**Massachusetts Institute of Technology** Cambridge, MA
Ph.D. in Atmospheric Science, June 1999. Dissertation under Prof. Richard Lindzen: "The mutual interaction between the great continental ice sheets and atmospheric stationary waves."

**Oriel College, University of Oxford** Oxford, UK
Bachelor of Arts degree in Physics. First Class Honors, June 1992.

## PROFESSIONAL EXPERIENCE

*September 2007 to present*: Associate Professor, Seattle, WA
*January 2003 to 2007*: Assistant Professor
**University of Washington,** Department of Earth and Space Sciences, Adjunct Associate Professor, Dept. of Atmospheric Sciences

*September 1999 to December, 2002*: Postdoctoral Researcher, Seattle, WA
**University of Washington,** Quaternary Research Center/Joint Institute for the Study of the Atmosphere and Ocean.

*September 1993 – March 1999*: Graduate Research Assistant, Cambridge, MA
*March 1999 – July 1999*: Post-doctoral Associate,
**Massachusetts Institute of Technology,** Program in Atmospheres, Oceans, and Climate

## GRANTS

*Old:*
PCC seed grant. September '03 to August '04., $26,000. Peaks, precipitation, and their co-evolution. Gerard Roe, Dale Durran, Bernard Hallet (PIs).

UW Royalty Research Fund, Aug '05 to Jul '06, $18, 649. Patterns of precipitation in mountainous regions. Gerard Roe, Dale Durran (PIs).

NSF DIVISION OF EARTH SCIENCES, GEOMORPHOLOGY AND LAND USE DYNAMICS PROGRAM. Workshop: Climate over Landscapes; Boulder, Colorado; September 19-21, 2007 $73,570. PIs Gerard Roe, Joe Galewsky.

NSF 0314710. DIVISION OF ATMOSPHERIC SCIENCES, CLIMATE DYNAMICS PROGRAM Sep'03 to Aug'05, $249,521. Un derstanding the role of rain-on-snow events in high latitude climates: soil temperatures and ecosystems. Jaakko Putkonen, Cecilia Bitz, Gerard Roe (PIs).

*Current:*
NSF 0409884 DIVISION OF EARTH SCIENCES, CONTINENTAL DYNAMICS PROGRAM Aug'04 to Jul'09, $408,616 (U. Wash. portion). Collaborative research: St. Elias Erosion/tectonics Project (STEEP) Bernard Hallet, Gerard H Roe (UW PIs).

NSF 6312293 DIVISION OF EARTH SCIENCES, CONTINENTAL DYNAMICS PROGRAM July'05 to June'09, $270,125 (U. Wash. portion). Upward and Outward: Tibetan Plateau growth and climatic consequences. Gerard Roe (UW PIs).

NSF DIVISION OF ATMOSPHERIC SCIENCES, GEOMORPHOLOGY AND LAND USE DYNAMICS PROGRAM. Patterns of precipitation and their control on landscape dynamics Jan '07 to Dec '09, $311,410. PIs Gerard Roe, Dale Durran, David Montgomery.

NSF DIVISION OF EARTH SCIENCES, PALEOCLIMATE PROGRAM. Dynamical Climate Reconstruction Using Paleoclimate Data and Ensemble State Estimation. May '09 to April '12. $370,000. PIs Greg Hakim, David Battisti, Gerard Roe.

*Pending:*

NSF DIVISION OF EARTH SCIENCES, CONTINENTAL DYNAMICS PROGRAM. Collaborative Research: Growth of the Tibetan Plateau and Eastern Asia Climate: Clues to Understanding the Hydrological Cycle. May '09 to Apr '14. $650,000 (UW portion) PIs(UW) Gerard Roe, David Battisti.

**SERVICE, HONORS AND AWARDS**

Associate Editor, Quaternary Research, Sept '04 to present.
Distinguished Public Lecturer, Cooperative Institute for Research in Environmental Sciences. October '08.
Flint Visiting Professor, Yale University, April to June, 2007
ESS teaching award, honorable mention, 2006, 2007.
UW distinguished mentor award, nomination 2009.
Session organizer, Rapid Climate Change, Leverhulme Symposium, Cambridge University, Royal Society, London, U.K, March, '08.
Organizer NSF workshop "Climate over Landscapes", Sept '07
Carl-Gustav Rossby Award for 'Most Outstanding Thesis' submitted to the Program in Atmospheres, Oceans, and Climate, 1998-99.
Oxford University Exhibition, June 1990.

**UW SERVICE/COMMITTEES**

ESS undergraduate advisor Jun 06 to present;
ESS computer committee (chair, 2007); ESS curriculum committee; ESS prelims exam committee Fall 04, 05, 06, 08; ESS graduate admissions Spr '05; ESS

glaciology research faculty search committee, Fall '04; Seminar organizer (ESS, QRC, PCC).
UW Program on climate change: governing board Jan 03 to present; executive committee Jun 05 to present; director search committee, June 06; postdoc hiring committee, Sept '03; organizer summer retreat Sept'03.
UW Program on the Environment, member advisory board
UW College of the Environment, Institute committee
Math and Science Field Committee to the Provost's Advisory Council on Teacher Preparation

## CLASSES TAUGHT

**ESS 201:** The Earth system and climate, Winter, 2009, 2010
**ESS exploration seminar Denmark and Greenland,** August, 2008
**ESS 590:** Landscapes and Climate, Spring 2009
**ENVIR 511 512:** Graduate certificate in environmental management, City of Bellevue action plan for community greenhouse gas reduction, Winter, Spring 09
**ESS 314:** Geophysics: expedition to planet Earth, Winter 2004, Fall, 2004, 2005, 2006, 2007, 2008, 2009
**PCC/ATM/OCN/ESS 587:** Climate dynamics, Fall 2003, 2004, 2005, 2006, 2007, 2008
**ESS 416/516:** Geophysics: the atmosphere, Spring 2003, 2004, 2005, 2006.
**ESS 590:** Special topics in climate: Heinrich events (seminar). Fall 2003, Winter, Spring 2004. Centennial variability (seminar), Winter 2005; African aridity (seminar), Winter, '06; The Holocene Express, Winter 2007.
**ESS/ATM 590**: Knowability and no ability in climate and earth sciences (seminar), Spring '06, '08, '09
**PCC 586:** That sinking feeling: the thermohaline circulation (seminar). Spring, 2005.
**ESS 534/ATM 514:** Ice and climate modeling, Winter 2001.
**ESS 431:** Principles of glaciology (5 lecture model ice dynamics), Fall 2003.

## GRADUATE ADVISEES

Alison Anders (ESS, PhD, 2005)[†], Michael O'Neal (ESS, PhD, 2005)[†], Drew Stolar (ESS, PhD, 2006)[†], Noah Finnegan (ESS, PhD, 2006)[†], Summer Rupper (ESS, MSc, 2004; ESS, PhD, 2007)[*], Camille Li (ATM, PhD, 2007)[#], Kevin Rennert (ATM PhD 2007)[†], Kat Huybers (ESS, MSc 2007)[*], Jane Locke (ESS PhD 2008)[#], Jim Lutz (CFR PhD 2008)[#], Robert Sheerer (ESS, MSc 2008)[#], Eric Buer (ESS, MSc 2008)[#], Jennifer Adams (CivE PhD 2007)[#], Justin Minder (ATM PhD candidate)[*], Kevin Wood (ESS PhD candidate)[*], Sandra Penny (ATM PhD candidate)[*], Michelle Koutnik (ESS PhD candidate)[#], Ted Bohn (CivE PhD candidate)[#], Rachel Headley (ESS, PhD candidate)[†], Erin Burke (ESS PhD candidate)[*], Nichole Feldl (At. Sci. PhD candidate)[*], Angela Pendergrass (At. Sci. PhD candidate)[*], Brian Smoliak (At. Sci., PhD candidate)[†], Nicholas Siler (ESS, PhD candidate)[†]
*[†]major research advisor, [*] formal advisor, [#]committee member (with research input)*

**PUBLICATIONS**

*In preparation:*

Roe, G.H., N. Feldl, H. Sinclair, and S.D. Willett, 2009: Extreme weather and the downsizing of the Alps.

Roe, G.H., and M.B. Baker, 2009: Notes from a catastrophe - the descent into a snowball Earth.

Headey, R., G.H. Roe, and B. Hallet, 2009: Comparing observed and modeled veolcities in Seward throat: implications for erosion beneath fast-moving ice streams.

Feldl, N., and G.H. Roe, 2009: The shape of daily precipitation in the American West as a function of ENSO.

Roe, G.H., 2009: What do glaciers tell us about climate change?

Roe, G.H., and D.S. Battisti, 2009: Knowability and no ability in climate and earth sciences.

*Submitted:*

Penny, S.M., G.H. Roe, and D.S. Battisti, 2009: The source of the midwinter suppression of the Pacific storm track. *J. Climate, in review*.

Roe, G.H., and M.T. Brandon, 2009: Critical form and feedbacks in mountain belt dynamics: the role of rheology. *J. Geophy. Res., in review*.

Dayem, K, D.S. Battisti, G.H. Roe, P. Molnar, 2009: Lesssons learned from the modern monsoon applied to the interpretation of paleoclimate records. *J. Climate, in review*.

*Published/in press (peer-reviewed):*

Roe, G.H. and M.A. O'Neal, 2009: The response of glaciers to intrinsic climate variability: observations and models of late Holocene variations. *J. Glaciology, in press*

Minder, J.U., G.H. Roe, and D.R. Montgomery, 2008: Spatial patterns of rainfall and landslide hazard, *Water Resources Research,* 45, W04419.

Huybers, K.M., and G.H. Roe, 2009: Glacier response to regional patterns of climate variability. *J. Climate, in press*.

Baker, M.B., and G.H. Roe, 2009: The shape of things to come: why is climate change so predictable? *J. Climate, in press*.

Rupper, S.B., G.H. Roe, and A. Gillespie, 2009: Spatial patterns of glacier advance and retreat in Central Asia in the Holocene. *Quat. Res., in press*.

Minder, J.U. and G.H. Roe, 2009: Precipitation in mountainous terrain. To appear in the Encyclopedia of Snow, Ice and Glaciers. Edited by U.K. Haritashya, V. Singh, and P. Singh, Springer Press.

Roe, G.H., 2009: Feedbacks, time scales, and seeing red. *Annual Reviews of Earth and Planetary Sciences,* 37: 93-115.

Roe, G.H., 2008: On the paleoclimate interpretation of Chinese loess. *Quat. Res.,* 71, 150–161.

Galewsky, J., and G.H. Roe, 2008: Climate over landscapes: The emerging links between geomorphology and the atmospheric sciences. *White paper, submitted to the National Research Council*.

Roe, G.H., K.X. Whipple, J.K. Fletcher, 2008: Feedbacks between climate, erosion, and tectonics in a critical wedge orogen. *Amer. J. Sci.,* 308, 815–842.

Minder, J.U., D.R. Durran, and G.H. Roe, A.M. Anders, 2008: The climatology of small-scale orographic precipitation over the Olympic mountains: Patterns and processes. *Quat. J. Roy. Met. Soc.,* 134, 817-839.

Rennert, K., G.H. Roe, C.M. Bitz, J. Putkonen, and D. Fischer, 2008: Rain-on-snow in the circumpolar Arctic: climatology and impacts. *J. Climate, doi: 10.1175/2008jcli2117.1*

Anders, A.M., and G.H. Roe, D.R. Montgomery, and B. Hallet, 2008: Coupled evolution of topography and orographic precipitation in varied climates. *Geology,* 36, 479-482.

Rupper, S.B., and G.H. Roe, 2008: Glacier changes and regional climate – a mass and energy balance approach. *J. Climate, 21, 5384- 5401.*

Owen, L.A., G. Thackray, R.S. Anderson, J. Briner, D. Kaufman, G.H. Roe, W. Pfeffer, and C. Yi, 2008: Integrated research on mountain glaciers: Current status, priorities and future prospects. *Geomorphology, doi:10.1016/j.geomorph.2008.04.019.*

Roe, G.H., and M.B. Baker, 2007: Why is climate sensitivity so unpredictable? *Science,* 318, 629-632.

Stolar, D.R., G.H. Roe, and S.D. Willett, 2007: Controls on the patterns of topography and erosion rate in a critical orogen at steady state, *J. Geophys. Res.,* 112, F04002.

Tomkin, J.T., and G.H. Roe, 2007: The response of a glaciated critical wedge orogen to changes in climate. *Earth. Plan. Sci. Lett.*, 262, 385–397.

Anders, A.M., G.H. Roe, D.R. Durran, and J.R. Minder, 2007: Small-scale spatial gradients in climatological precipitation on the Olympic Peninsula. *J. Hydromet.,* 8, 1068-1081.

Roe, G.H., 2006: In defense of Milankovitch. *Geophys. Res. Lett.* 33, L24703, doi:10.1029/2006GL027817.

Roe, G.H., D. Stolar, and S.D. Willett, 2006: The sensitivity of a critical wedge orogen to climatic and tectonic forcing. in: S.D. Willett, N. Hovius, M. Brandon, D.M. Fisher, (Eds), *Tectonics, Climate, and Landscape Evolution*: Geological Society of America Special Paper 398, Geological Society of America, Boulder, CO, 227-239.

Roe, G.H., and M. Baker, 2006: Microphysical and geometrical controls on the pattern of orographic precipitation. *J. Atmos. Sci.*, 63, 861–880.

Stolar, D., G.H. Roe, and S.D. Willett, 2006: Evolution of a critical orogen under various forcing scenarios: findings from a numerical sandbox. in: S.D. Willett, N. Hovius, M. Brandon, D.M. Fisher, (Eds), *Tectonics, Climate, and Landscape Evolution*: Geological Society of America Special Paper 398, Geological Society of America, Boulder, CO, 240-250.

Anders, A.M., G.H. Roe, B. Hallet, D.R. Montgomery, N. Finnegan, and J. Putkonen, 2006: Spatial patterns of precipitation and topography in the Himalaya. in: S.D. Willett, N. Hovius, M. Brandon, D.M. Fisher, (Eds), *Tectonics, Climate, and Landscape Evolution*: Geological Society of America Special Paper 398, Geological Society of America, Boulder, CO, 39-53.

Finnegan, N., G.H. Roe, D.R. Montgomery, B. Hallet, 2005: A scaling relationship for channel width in bedrock rivers. *Geology, 33, 229-232.*

Roe, G.H., 2005: Orographic precipitation. *Annual Review of Earth and Planetary Sciences,* 33: 645-671.

Anders, A.M, G.H. Roe, and D.R. Durran, 2004: Conference notebook Orographic precipitation and the form of mountain ranges. *Bulletin of the American Meteorological Society*. 85, 498-499.

Roe, G.H., and E. J. Steig, 2004: On the characterization of millennial-scale

climate variability. *J. Climate*, **17**, 1929-1944.
Bitz, C.M., and G.H. Roe, 2004: A physical explanation for the high rate of sea-ice thinning in the Arctic Ocean. *J. Climate*, 17, 3623-3632.
Rupper, S., E.J. Steig, and G.H. Roe, 2004: On the relationship between snow accumulation at Mt. Logan, Yukon, and climate variability in the North Pacific. *J. Climate*. 17,4724-4739.
Roe, G.H., D.R. Montgomery, and B. Hallet, 2003: Orographic climate feedbacks on the relief of mountain ranges. *J. Geophys. Res.,* **108**, doi:10.1029/2001JB001521.
Putkonen, J., and G.H. Roe, 2003: Rain-on-snow events, soil temperatures, and the sensitivity of ungulates to climate change. *Geophys. Res. Lett.*, **30**, doi: 10.1029/2002GL016326.
Roe, G.H., 2002: Modeling orographic precipitation over ice sheets: an assessment over Greenland. *J. Glaciology*, **48**, 70-80.
Roe, G.H., D.R. Montgomery, and B. Hallet, 2002: Effects of orographic precipitation variations on the concavity of steady-state river profiles. *Geology*, **30**,143-146.
Risbey, J.S., P.J. Lamb, R.L. Miller, M.C. Morgan, and G.H. Roe, 2002: Elucidating the structure of regional climate scenarios by combining synoptic and dynamic guidance and GCM output. *J. Climate*, **15**, 1036-1050.
Roe, G.H., and R.S. Lindzen, 2001: The mutual interaction between continental-scale ice sheets and atmospheric stationary waves. *J. Climate*, **14**, 1450-1465.
Roe, G.H., and R.S. Lindzen, 2001: A one-dimensional model for the interaction between ice sheets and atmospheric stationary waves. *Climate Dynamics*, **17**, 479-487.
Roe, G.H., and M.R. Allen, 1999: Competing explanations for the 100,000-yr ice age cycle. *Geophys. Res. Lett.*, **26**, 2259-2262.
Lindzen, R.S., and G.H. Roe, 1997: The effect of concentrated PV gradients on stationary waves: correction, *J. Atmos. Sci.*, **54**, 1815-1818.
Roe, G.H., and R.S. Lindzen, 1996: Baroclinic adjustment in a two level model with barotropic shear, *J. Atmos. Sci.*, **53**, 2749-2754.

**INVITED SEMINARS, TALKS, AND COURSES:**

**2009:**

**University of Delaware,** Geography department colloquium, April, 2009. The shape of things to come: what are the potentials and potential limits to global climate predictions?

**University of Delaware,** Geography department seminar, April, 2009. Was there a little ice age?

**Yale University,** Dept. seminar, April, 2009: Extreme weather and the downsizing of the Alps.

**University of Edinburgh,** School of Geosciences seminar, March 2009: Was there a little ice age?

**University of Washington,** Seattle, WA, February, 2009: Dept. Atmospheric Sciences colloquium: What do glaciers tell us about climate variability and change?

**California Institute of Technology, Pasadena, CA,** Environmental Science and Engineering colloquium January, 09: The shape of things to come: what are the limits to global climate predictions?

**2008:**

**Cooperative Institute for Research in Environmental Science, Distinguished Public Lecture,** Boulder, Oct, 2008: The shape of things to come: what are the limits to global climate predictions?

**University of Colorado,** Boulder, Oct, 2008: Dept. Geological Sciences colloquium: What do glaciers tell us about climate change?

**University of Colorado,** Boulder, Oct, 2008: Dept. Geological Sciences seminar: The tectonic governor and the downsizing of the Alps.

**University of Washington,** Seattle, WA, Oct, 2008: Dept. Earth and Space Sciences colloquium: The tectonic governor and the downsizing of the Alps.

**Stochastic Climate Modeling Workshop,** Victoria, July 2008: Stochastic Ice.

**West coast climate initiative workshop, Univ. Southern California, LA,** Jun, 2008: Decadal climate variability in the Pacific.

**Environmental Protection Agency,** Washington D.C., April 2008: The shape of things to come: why is climate sensitivity so unpredictable (and who cares anyway?)

**University of Michigan,** Dept. of Geological Sciences, April 2008: The tectonic governor: critical form and feedbacks in mountain-belt dynamics.

**University of Michigan,** Dept. of Applied Math Colloquium, April 2008: Knowability and no ability in climate prediction.

**Yale University,** Dept. seminar, February, 2008: Glaciers and climate: regional variability vs. change.

**Massachusetts Institute of Technology,** Earth, Atmospheric, and Planetary Sciences Dept. Colloquium, February, 2008. The shape of things to come: why is climate sensitivity so unpredictable (and who cares anyway?).

**Harvard University,** Dept. seminar, February, 2008: Glaciers and climate: regional variability vs. change.

**University of California, Berkeley,** Dept. Colloquium, January, 2008: Why is climate sensitivity so unpredictable? Berkeley, CA.

**American Mathematical Society,** Annual meeting, January, 2008: Why is climate sensitivity so unpredictable? San Diego, CA.

**2007:**

**NASA CERES workshop.** Victoria, B.C., November 2007: Why is climate sensitivity so unpredictable? Berkeley, CA.

**University of Washington,** Program on Climate Change lecture series, October, 2007. "Glaciers and climate"

**Brigham Young University,** Geology dept. seminar, October, 2007. "Why is climate sensitivity so unpredictable?"

**University of Washington,** Atmospheric Science dept. colloquium, September, 2007. "Why is climate sensitivity so unpredictable?"

**Thun, Switzerland,** June, 2007. Climate and surface processes workshop "Knowability and no ability in climate and surface processes"

**Yale University,** Flint Visiting Professor, May 2007: "Mountain-belt dynamics: climate feedbacks and critical topographic form"

**National university of Mexico,** Mexico City, May 2007: Colloquium: "Mountain-belt dynamics: climate feedbacks and critical topographic form"

**American Geophysical Union,** Spring meeting, Acapulco, Mexico, May 2007 "On the interpretation of Chinese loess as a paleoclimate proxy".

**Arizona State University**, School of Earth Sciences and Space exploration, department colloquium, March, 2007: "Mountain belt dynamics: climate feedbacks and critical topographic form"; research seminar: "Reconciling glacier changes and climate"

**Sanya, China** NSF/CNSF workshop on Tibet and climate, January, 2007: "On the interpretation of Chinese loess as a paleoclimate proxy"

**2006:**

**University of Edinburgh,** School of Geosciences, October, '06**.** "Reconciling glacier changes and climate"

**University of Bergen, Bjerknes Centre for Climate Research.** Summer school on Multidecadal climate variability and teleconnection dynamics. Lecturer, Sept'06.

**University of Colorado,** workshop on Milankovitch and climate, Jul, '06. What does 'Milankovitch and climate' really mean?

**University of Edinburgh**, Earth Sciences department, Hutton Club lecture, June 2006, Rocks, rivers, and rain: feedbacks between climate, erosion and tectonics in mountain belt evolution. Department seminar, June 2006: In defense of Milankovitch.

**University of Delaware,** Geography department colloquium, April, 2006. In defense of Milankovitch.

**2005:**

**American Geophysical Union** Fall Meeting, December, 2005: Rocks and rain: orographic precipitation and the form of mountain ranges. Roe, G H, Anders, A.M., Durran, D.R., Montgomery, DR., Hallet, B.

**Massachusetts Institute of Technology,** Earth, Atmospheric, and Planetary Sciences. Oceanography seminar. March 2005. In defense of Milankovitch.

**University of Washington**, Earth and Space Sciences, February, 2005. The drumbeat of tiny raindrops: exhumation, erosion, and the sculpting of mountain ranges.

**2004:**

**University of Washington,** Program on climate change Fall seminar series, November, 2004. Rocks, rivers, and rain: the interplay between climate, erosion, and tectonics.

**University of Washington**, Department of Atmospheric Sciences Colloquium, October, 2004. In defense of Milankovitch.

**Massachusetts Institute of Technology,** Earth, Atmospheric, and Planetary Sciences department colloquium, September, 2004. Rocks, rivers, and rain: the interplay between tectonics, erosion, and climate.

**International Geophysical Congress,** August, 2004: Climatic and tectonic controls on orogen evolution.

**University of Washington** Quaternary research center seminar series, June 2004: Dust storms in Asia: at a loess for words.

**European Geophysical Union,** Annual meeting, April, 2004: The mutual interaction between continental-scale ice sheets ad atmospheric stationary waves

**University of Maryland,** Department of Meteorology colloquium, April, 2004: On the characterization of millennial-scale climate variability.

**National Center for Atmospheric Research,** joint meeting of the climate variability and paleoclimate working groups, February, 2004: On the characterization of millennial-scale climate variability.

**2003:**

**American Geophysical Union** Fall Meeting, December, 2003: On the characterization of millennial scale climate variability (with Eric Steig).

**Harvard University**, Earth and Planetary Sciences department colloquium, November, 2003: Rocks, rivers, and rain: interactions between tectonics, climate, and erosion.

**Massachusetts Institute of Technology**, Oceanography seminar, November, 2003: On the characterization of millennial-scale climate variability.

**University of California Santa Cruz,** Earth Sciences department colloquium, May, 2003: Orographic precipitation and the form of mountain ranges. Department seminar: On the characterization of millennial-scale climate variability.

**University of Washington,** Atmospheric Sciences department, Clouds and precipitation seminar. April, 2003: A simple model of orographic precipitation for use in landscape evolution.

**University of Washington,** Earth and Space Sciences department colloquium, March, 2003: On the characterization of millennial-scale climate variability.

**University of Washington,** Atmospheric Sciences department colloquium, February, 2003: On the characterization of millennial-scale climate variability (with Eric Steig).

**University of Washington,** Quaternary Research Center seminar, February, 2003: Rain-on-snow events impact soil temperatures and affect ungulate survival (with Jaakko Putkonen).

**2002:**

**Yale University,** Geology and Geophysics department colloquium, November, 2002: The interaction between orographic precipitation and the form of mountain ranges

**Western Washington University,** Geology department seminar, June, 2002: climate feedbacks on the evolution of mountain belts.

**University of Washington,** Earth and Space Sciences, two department seminars, June, 2002: 1. Feedbacks between orographic precipitation and the form of mountain ranges. 2. Do we understand the physics of the ice ages?

**University of Chicago,** Geophysical Sciences department seminar, April, 2002: Feedbacks between orographic precipitation and the form of mountain ranges.

**University of Colorado,** Institute for Arctic and Alpine Research, two department seminars 1.Feedbacks between orographic precipitation and the form of mountain ranges. 2. Do we understand the physics of the ice ages?

**Purdue University,** Earth and Atmospheric Sciences department seminar, January, 2002: Feedbacks between orographic precipitation and the form of mountain ranges.

**University of Alaska, Fairbanks,** March, 2002. Chapman lecturer. Short course ice sheet climate interactions: 1. Milankovitch forcing of ice age cycles 2. Climate -ice sheet interactions on ice age time scales.

**2001:**

**Applied Physics Laboratory, University of Washington,** laboratory seminar. May, 2001. The mutual interaction between continental-scale ice sheets and atmospheric stationary waves.

**California Institute of Technology,** Division of Geological and Planetary Sciences, department seminar, March, 2001: Climate feedbacks on the evolution of ice sheets and mountain ranges.

**University of California at Berkeley,** Geography department seminar, February, 2001: Climate feedbacks on the evolution of ice sheets and mountain ranges.

**University of Wisconsin at Madison,** Atmospheric Sciences department seminar, March, 2001: Climate feedbacks on the evolution of ice sheets and mountain ranges.

**2000:**

**University of Washington,** Atmospheric Science department, April, 2000: Let it snow: modeling precipitation over ice sheets: an assessment for Greenland.

**1999:**

**University of Toronto,** Physics department seminar, April, 1999: The mutual interaction between continental-scale ice sheets and atmospheric stationary waves.

**University of Chicago,** Geophysical Sciences department seminar, February, 1999: The mutual interaction between continental-scale ice sheets and atmospheric stationary waves.

**University of Washington,** Quaternary Research Center seminar, February, 1999: The mutual interaction between continental-scale ice sheets and atmospheric stationary waves

**Other conference presentations**

**2008:**

Minder, J.U., G.H. Roe, and D.R. Durran, 2008: Pacific Northwest Snowpack. , *Geophysical Union Fall meeting*, San Francisco, December 2008

Rupper, S.B., K. Huybers, and G.H. Roe, 2008: Intrinsic variability of lake levels, *Geophysical Union Fall meeting*, San Francisco, December 2007

**2007:**

Roe, G.H. and M.B. Baker, 2007: Why is climate sensitivity so unpredictable? *American Geophysical Union Fall meeting*, San Francisco, December 2007.

Rupper, S.B., and G.H. Roe, 2007: Glaciers and climate in central Asia. *American Geophysical Union Fall meeting*, San Francisco, December 2007.

Minder, J., G.H. Roe, D.R. Durran, A.M Anders, D.R. Montgomery. Understanding small-scale patterns of mountain precipitation and their impacts: *Pacific Northwest Weather Workshop*, March 2007.

Dayem, K.E., D.S. Battisti, G.H. Roe, 2007: Lessons Learned From the Modern Monsoon Applied to Interpretation of Paleoclimate Records, *Geophysical Union Fall meeting*, San Francisco, December 2007

**2006:**

Roe, G.H, and M.T. Brandon, 2006: Critical form and mountain belt dynamics, *American Geophysical Union Fall meeting*, San Francisco.

Huybers, K., and G.H. Roe, 2006: Understanding glaciers as an indicator of regional climate variability, *American Geophysical Union Fall meeting*, San Francisco, October, 2006.

Minder, J., G.H. Roe, D.R. Durran, A.M Anders, D.R. Montgomery, 2006: Understanding the climatology of small-scale orographic precipitation

patterns: progress from the Olympic mountains. San Antonio, Texas, Sept 2006

Huybers, K., and G.H. Roe, 2006: Understanding glaciers as an indicator of regional climate variability, *Northwest Glaciology meeting*. Fairbanks, Alaska

Tomkin, J.T.; Roe, G.H., 2006: Glaciated orogenic wedges: sensitivity of tectonics to climate change, *European Geophysical Union annual meeting, EGU06-A-05185;* Vienna.

***2005:***

Tomkin, J.T., Roe, G.H., 2005 The response of a steady state, glaciated critical wedge orogen to changes in climate. *Eos Trans. AGU, 86(47), Fall Meet. Suppl., Abstract, H53I-05,* San Francisco

Whipple, K.X., Roe, G.H., Meade, B., 2005: Coupled evoluation of orographic precipitation and orogenic wedges. *Geological Society of America Abstracts with Programs, Earth System Processes 2, p. 13-1,* Calgary.

Roe, G.H., Whipple, K.X., Fletcher, J.K., 2005: Climate feedbacks and critical wedge orogens. *Geological Society of America Abstracts with Programs, Earth System Processes 2, p. 13-3,* Calgary.

Stolar, D.B., Roe, G.H., and Willett, S.D., 2005. Tectonic and climatic control of non-uniform rock uplift in the Olympic Mountains of Washington State, *European Geosciences Union, Abstract TS10-1FR3O-004*.

Stolar, D.B., Roe, G.H., and Willett, S.D., 2005: Reconciling observations and theory of erosion rate patterns in the Olympic Mountains of Washington State, *AGU Fall meeting, T12A-02*, San Francisco.

Stolar, D.B., Roe, G.H., and Willett, S.D., 2005. Tectonic and climatic control of non-uniform rock uplift in the Olympic Mountains of Washington State, *Geological Society of America Abstracts with Programs, Earth System Processes 2, p. 13-2.,* Calgary.

Huybers, K., Roe,G.H., and O'Neal, M. Glacier Response to Intrinsic Climate Variability in the Pacific Northwest. *Eos Trans. AGU, 86(47), Fall Meet. Suppl., Abstract,* C23-1162., San Francisco

(Invited) Durran, D.R., Minder, J.U., Anders, A.M., Roe, G.H., 2005: Patterns and mechanisms of orographic precipitation in the Olympic Mountains, Washington State. *Eos Trans. AGU, 86(47), Fall Meet. Suppl., Abstract,* H53-J02., San Francisco.

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