

Naomi Goldenson

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Ph.D. Candidate, Department of Atmospheric Sciences, University of Washington 2015--
Dissertation: Uncertainty Quantification and the Influence of Large-scale Dynamics on Climate
Variability of Western North America
Advisors: Cecilia Bitz (UW) and Ruby Leung (Pacific Northwest National Lab)

RESEARCH INTERESTS

Multi-scale global climate simulations. Regional climate variability. Midlatitude climate dynamics.
Climate of Western North America. Uncertainty quantification. Educational simulations.

EDUCATION

Ph.D., Atmospheric Sciences, University of Washington, Seattle, WA Expected Fall, 2017
M.S., Atmospheric Sciences, University of Washington, Seattle, WA 2012
M.S., Geological Sciences, Arizona State University, Tempe, AZ 2007
B.A., Physics with Honors, Certificate in International Relations, Wesleyan University, Middletown, CT 2005

PUBLICATIONS

Refereed Articles

- Rhines, A. and N. Goldenson. (2016) *Objective selection of ensemble boundary conditions for climate downscaling*, in Banerjee, A., W. Ding, J. Dy, V. Lyubchich, and A. Rhines, eds.: *Proceedings of the 6th International Workshop on Climate Informatics*. NCAR Technical Note NCAR/TN-529+PROC, 159 pp.
- Goldenson, N., Doherty, S.J., Bitz, C.M., Holland, M.M., Light, B., Conley, A.J. (2012) *Arctic Climate Response to Forcing from Light-Absorbing Particles in Snow and Sea Ice in CESM*, *Atmospheric Chemistry and Physics*, 12, 7903-7920.
- Goldenson, N., Desch, S., Christensen, P.R. (2008) *Non-equilibrium between dust and gas temperatures in the Mars atmosphere*, *Geophysical Research Letters*, 35, L08813.
- Rubin, D., Goldenson, N., Voth, G. (2006) *Failure and strengthening of granular slopes under external vibration*, *Physical Review E*, 74, 051307.
- Luhman, K. L., McLeod, K. K., & Goldenson, N. (2005). *A Hubble Space Telescope search for substellar companions in the young cluster IC 348*. *The Astrophysical Journal*, 623(2), 1141.

Manuscripts in Preparation

- Goldenson, N., Mauger, G., Bitz, C.M., and Leung, L.R. (2017) *Ensemble Design for Estimating Internal Variance at Regional Scale*.
- Goldenson, N., Rhines A., Bitz, C.M., and Stuecker, M. (2017) *Cross-seasonal Correlation in Modes of Variability in the Community Earth System Model Large Ensemble*.
- Goldenson, N., Leung, L.R., Bitz, C.M., and Blanchard, E. (2017) *Climatological Influence of Atmospheric River Events on Mountain Snow of Western North America*.

PROFESSIONAL MEETING ABSTRACTS

Talks:

- Goldenson, N., Leung, R.L., Bitz, C. (2017) *Multi-scale Historical Simulations of Regional Precipitation Extremes*, 29th Conference on Climate Variability and Change, American Meteorological Society 97th Annual Meeting, 22-26 January, 2017, Seattle, WA., Abs. 4A.3.
- Goldenson, N., Leung, R.L., Bitz, C. (2016) *Characterizing Regional Climate Model Uncertainty*, 7th Annual Northwest Climate Conference, Stevenson, WA.
- Goldenson, N., Mauger, G., Leung, R.L., Bitz, C. (2016) *Inter-model Variance in Northwest CMIP5 Model Precipitation due to Jet Variability*, Pacific Northwest Weather Workshop, Seattle WA.
- Goldenson, N. (2014) *Real-Time Climate Simulations in the Interactive 3D Game Universe Sandbox 2*, EOS. Trans. AGU, Fall Meeting Abstracts. ED52A-01.
- Goldenson, N., Holland, M., Bitz, C., Doherty, S., Light, B. (2010) *Arctic Climate Response to Aerosols on Sea Ice and Snow in CESM*, 23rd Conference on Climate Variability and Change, American Meteorological Society 91st Annual Meeting, 23-27 January 2011 in Seattle, WA., Abs. 12B.3.

Posters:

- Goldenson, N., Leung, R.L., Bitz, C. (2016) *Historical Variability Across Scales: Circulation and Snowpack*, Graduate Climate Conference, Pack Forest, WA.
- Goldenson, N., Rhines, A. (2016) *Clustering of Sea Surface Temperature Variability Across the Large Ensemble*, 21st Annual Community Earth System Model Workshop, Breckenridge, CO.
- Goldenson, N., Leung, R.L., Zhao, C., Bitz, C. (2015) *Model for Prediction Across Scales (MPAS) Applied to Regional Climate of the Northwestern U.S.*, EOS. Trans. AGU, Fall Meeting Abstracts. A23E-0360.
- Goldenson, N., Mauger, G., Leung, R.L., Bitz, C. (2015) *Scenarios, Variability, and Climate Models: Constraining the Range of Possibilities for Future Northwest Climate*. 6th Annual Northwest Climate Conference, Coeur d'Alene, Idaho.
- Goldenson, N., Desch, S., Christensen, P.R. (2006) *Constraints on Atmospheric Dust Properties in Radiative Transfer Models for Mars*, EOS. Trans. AGU, 87(52) Fall Meet. Suppl., Abs. A13B-0910.

TEACHING

- "Glaciers and Global Change" - Graduate Teaching Assistant
Earth and Space Sciences, University of Washington, Seattle, WA Winter 2017
- "Physics Across Oceanography" - Graduate Teaching Assistant
School of Oceanography, University of Washington, Seattle, WA Fall 2016
- "Climate and Climate Change" - Graduate Teaching Assistant
Atmospheric Sciences, University of Washington, Seattle, WA Winter 2011
- "Introductory Geology" - Adjunct Instructor
Physical Science, Mesa Community College, Mesa, AZ Fall 2008 – Spring 2009
- "Introductory Geology Lab" - Graduate Teaching Assistant
School of Earth and Space Exploration, Arizona State University, Tempe, AZ Fall 2005 – Spring 2006
- "The Planets" - Course Assistant
Astronomy, Earth and Environmental Sciences, Wesleyan University, Middletown, CT Fall 2004

ACADEMIC RESEARCH POSITIONS

- Graduate Researcher** - Atmospheric Sciences, University of Washington 2009-2012
Thesis Title: Arctic Climate Response to Light-Absorbing Particles in
Snow and Sea Ice in the Community Earth System Model
Advisor: Cecilia Bitz
- Fulbright Fellow** - Instituto de Astrofísica de Andalucía, Granada, Spain 2007-2008
Project title: The Effects of Atmospheric Dust on Martian Climate
Host: Miguel Ángel López Valverde
- Graduate Researcher** - School of Earth and Space Exploration, Arizona State University 2005-2007
Thesis Title: Dust-Gas Temperature Disequilibrium at High Altitudes
in the Mars Atmosphere
Advisor: Phil Christensen
- Senior Honors Thesis** - Physics, Wesleyan University 2004-2005
Thesis Title: Slope Stability for Granular Materials Under External
Vibration
Advisor: Greg Voth

ADDITIONAL EXPERIENCE

- Science Communication Fellow, volunteer at Pacific Science Center Winter 2017 --
Martin Luther King County Labor Council Climate Caucus 2016 --
College of the Environment Diversity Committee at University of Washington Fall 2015 --