

# Justin R Minder

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POSITION Associate Professor  
University at Albany (SUNY)  
Department of Atmospheric and Environmental Sciences

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IDENTIFIERS  
  
ORCID: 0000-0001-7182-7898  
ResearcherID: K-5813-2017

RESEARCH INTERESTS Mountain weather and climate; regional climate dynamics; mesoscale meteorology; hydrometeorology

## EDUCATION

Aug. 2010 Ph.D., Atmospheric Sciences  
**University of Washington**, Seattle, Washington, USA  

- Advisors: Dr. Gerard Roe & Dr. Dale Durran
- Thesis: *On the Climatology of Orographic Precipitation in the Mid-Latitudes*
- Active member of University of Washington Program on Climate Change

May 2004 B.A., Double Major: Physics & Geology  
**Vassar College**, Poughkeepsie, New York, USA  

- General Honors
- Departmental Honors in Physics and Geology

## RESEARCH EXPERIENCE

Sept. 2018 – present Associate Professor, University at Albany, Atmospheric and Environmental Sciences  
Sept. 2012 – Sept. 2018 Assistant Professor, University at Albany, Atmospheric and Environmental Sciences  
Oct. 2010 – Sept. 2012 Richard Foster Flint Post-Doctoral Fellow, Yale University Department of Geology and Geophysics  

- Supervisor: Dr. Ronald B. Smith

Sept. 2004 – Jun. 2010 Graduate Research Assistant/Fellow, University of Washington Department of Atmospheric Sciences

Sept. 2003 – May 2004 Undergraduate Research Thesis, Vassar College

Summer 2003 National Science Foundation Summer Undergraduate Research Fellow in Oceanography, University of Rhode Island Graduate School of Oceanography

Summer 2002 Undergraduate Summer Research Intern, Vassar College

## RESEARCH FUNDING

### *Awarded*

Jan. 2016– Apr. 2019 • NOAA/NWS/CSTAR (co-PI; \$450,000): *Development of Improved Diagnostics, Numerical Models, and Situational Awareness of High-Impact Cyclones and Convective Weather Events*

Mar. 2014– Feb. 2019 • NSF-CAREER Award (PI; \$571,000): *CAREER: The Mesoscale Climate Dynamics of Rocky Mountain Snowpack Depletion*

Mar. 2015– Oct. 2018 • NSF-EAGER (PI; \$84,000): *Collaborative Research: Chilean Coastal Orographic Precipitation Experiment pilot project (CCOPE-2015)*

Jul. 2012– Jun. 2015 • UAlbany Faculty Seed Funding - FRAP-B (PI; \$3,900): *Understanding Topographic Influences on Lake-Effect Snow Bands via Profiling Radar Observations and Numerical Modeling*

## FIELD PROJECT EXPERIENCE

2017 Chemical Processing of Organics within Clouds  
(CPOC; <https://www.asrc-research.com/cpoc>)  
Whiteface Mountain, Wilmington, NY  
*Co-PI, experimental design, disdrometer & sounding observations, forecasting*

2015 The Chilean Coastal Orographic Precipitation Experiment  
(CCOPE; <http://www.atmos.albany.edu/student/massmann/ccope.html>)  
Arauco Province, Chile  
*Co-PI, experimental design, coordinated operations, profiling radar observations and soundings*

2013–2014 Ontario Winter Lake-effect Systems  
(OWLeS; [www.eol.ucar.edu/projects/owles/](http://www.eol.ucar.edu/projects/owles/))  
Western New York, USA  
*Deployed and analyzed data from profiling radars*

2011 The Dominica Experiment  
Dominica, WI  
(DOMEX; <https://sites.google.com/a/domex2011.com/domex2011/>)  
*Surface instrument deployment, flight scientist, mission planning*

2004–2010 Olympic Mountain Rainfall Climatology  
Coastal Washington, USA  
*Operations design & direction, instrument deployment*

## ADDITIONAL EDUCATION & WORKSHOPS

Sep. 2018	Convection-Permitting Climate Modeling Workshop II (GEWEX, Boulder, CO)
Sep. 2016	Convection-Permitting Climate Modeling Workshop (GEWEX, Boulder, CO)
Jun. 2014	Stable Isotopes in Environmental Research and Undergraduate Research Training (Union College, Schenectady, NY)
Jan. 2014	UAlbany – University of the West Indies workshop on Caribbean rainfall variability and climate change (Albany, NY)
Mar. 2012	Orographic Precipitation and Climate Change Workshop (NCAR-RAL, Boulder, CO)
May 2009	Observing the Atmosphere: Observational Instruments and Techniques (NCAR-ASP, Boulder, CO)
Aug. 2008	Mountain Weather Workshop: Bridging the Gap Between Research and Forecasting (Whistler, BC)

#### HONORS AND AWARDS

2018	American Meteorological Society (AMS) Mountain Meteorology Early Career Award
2014–2019	National Science Foundation CAREER award
2010–2012	Richard Foster Flint Post-Doctoral Fellowship, Yale Department of Geology & Geophysics
Sept. 2010	AMS Mountain Meteorology Young Scientist Presentation Award, 2nd place oral
May 2009	International Conference on Alpine Meteorology (ICAM) Young Scientist Presentation Award, 1st place oral
2006–2009	National Science Foundation Graduate Research Fellowship
Sept. 2004	University of Washington Top Scholar Award
2004–2005	University of Washington Program on Climate Change First Year Fellowship
May 2004	Vassar College Erminnie Smith Prize for Excellence in Geology
May 2004	Inducted into Sigma Xi & Phi Beta Kappa

#### PUBLICATIONS

Student authors from Minder research group are underlined.

For each published journal article, **the below DOIs are hyperlinked to the full text**. Links to full text versions can also be found at:  
<http://www.atmos.albany.edu/facstaff/jminder/research>

*Published (Refereed)*

- |      |   |
|------|---|
| 2018 | 24) <b>Minder, J.R.</b> , <u>T.W. Letcher</u> , C. Liu, 2018: The character and causes of elevation-dependent warming in high-resolution simulations of Rocky Mountain climate change, <i>Journal of Climate</i> , <b>75</b> , 755–774, <a href="https://doi.org/10.1175/JAS-D-17-0166.1">https://doi.org/10.1175/JAS-D-17-0166.1</a> . |
| 2018 | 23) <u>Letcher, T.W.</u> , <b>J.R. Minder</b> , 2018: The simulated impact of the snow albedo feedback on the large-scale mountain-plain circulation east of the Colorado Rocky Mountains, <i>Journal of the Atmospheric Sciences, Journal of Climate</i> , <b>31</b> , 2093–2113, doi:10.1175/JAS-D-17-0166.1.                         |

- 2017 22) Xia, G., M.C. Cervarich, S.B. Roy, L. Zhou, **J.R. Minder**, P.A. Jimenez, J.M. Freedman, 2017: Simulating impacts of real-world wind farms on land surface temperature using WRF model: validation with MODIS observations, *Monthly Weather Review*, **145** (12), 4813–4836, doi:10.1175/MWR-D-16-0401.1.
- 2017 21) Massmann, A.K., **J.R. Minder**, R.D. Garreaud, D.E. Kingsmill, R.A. Valenzuela, A. Montecinos, S.L. Fuels, J.R. Snider, 2017: The Chilean Coastal Orographic Precipitation Experiment: Observing the influence of microphysical rain regime on coastal orographic precipitation, *Journal of Hydrometeorology*, **18** (10), 2723–2743, doi:10.1175/JHM-D-17-0005.1.
- 2017 20) Kristovich, D.A.R., R.D. Clark, J. Frame, B. Geerts, K.R. Knupp, K.A. Kosiba, N.F. Laird, N.D. Metz, **J.R. Minder**, T.D. Sikora, W.J. Steenburgh, S.M. Steiger, J. Wurman, G.S. Young, 2017: The Ontario Winter Lake-Effect Systems Field Campaign: Scientific and educational adventures to further our knowledge and prediction of lake-effect storms. *Bulletin of the American Meteorological Society*, **98** (2), 315–332, doi:10.1175/BAMS-D-15-00034.1.
- 2017 19) Letcher, T. W., and **J. R. Minder**, 2017: The simulated response of diurnal mountain winds to regionally enhanced warming caused by the snow albedo feedback. *Journal of the Atmospheric Sciences*, **74** (1), 49–67, doi:10.1175/JAS-D-16-0158.1.
- 2016 18) Welsh, D., B. Geerts, X. Jing, P. T. Bergmaier, **J. R. Minder**, W. J. Steenburgh, and L. S. Campbell, 2016: Understanding heavy lake-effect snowfall: The vertical structure of radar reflectivity in a deep snowband over and downwind of Lake Ontario. *Monthly Weather Review*, **144** (11), 4221–4244, doi:10.1175/MWR-D-16-0057.1.
- 2016 17) Campbell, L. S., W. J. Steenburgh, P. G. Veals, T. W. Letcher, and **J. R. Minder**, 2016: Lake-effect mode and precipitation enhancement over the Tug Hill Plateau during OWLeS IOP2b. *Monthly Weather Review*, **144** (5), 1729–1748, doi:10.1175/MWR-D-15-0412.1.
- 2016 16) **Minder, J. R.**, T. W. Letcher, and S. M. Skiles, 2016: An evaluation of high-resolution regional climate model simulations of snow cover and albedo over the Rocky Mountains, with implications for the simulated snow-albedo feedback. *Journal of Geophysical Research: Atmospheres*, **121** (15), 9069–9088, doi:10.1002/2016JD024995.
- 2015 15) Letcher, T. W., and **J. R. Minder**, 2015: Characterization of the simulated regional snow albedo feedback using a regional climate model over complex terrain. *Journal of Climate*, **28** (19), 7576–7595, doi:10.1175/JCLI-D-15-0166.1.
- 2015 14) **Minder, J. R.**, T. W. Letcher, L. S. Campbell, P. G. Veals, and W. J. Steenburgh, 2015: The evolution of lake-effect convection during landfall and orographic uplift as observed by profiling radars. *Monthly Weather Review*, **143** (11), 4422–4442, doi:10.1175/MWR-D-15-0117.1.
- 2015 13) Thériault, J. M., J. A. Milbrandt, J. Doyle, **J. R. Minder**, G. Thompson, N. Sarkadi, and I. Geresdi, 2015: Impact of melting snow on the valley flow field and precipitation phase transition. *Atmospheric Research*, **156**, 111–124, doi:10.1016/j.atmosres.2014.12.006.
- 2014 12) Nugent, A. D., R. B. Smith, and **J. R. Minder**, 2014: Wind speed control of tropical orographic convection. *Journal of the Atmospheric Sciences*, **71** (7), 2695–2712, doi:10.1175/JAS-D-13-0399.1.
- 2013 11) **Minder, J. R.**, and D. E. Kingsmill, 2013: Mesoscale variations of the atmospheric snow-line over the northern Sierra Nevada: multi-year statistics, case study, and mechanisms. *Journal of the Atmospheric Sciences*, **70** (3), 916–938, doi:10.1175/JAS-D-12-0194.1.
- 2013 10) **Minder, J. R.**, R. B. Smith, and A. D. Nugent, 2013: The dynamics of ascent-forced orographic convection in the Tropics: Results from Dominica. *Journal of the Atmospheric Sciences*, **70** (12), 4067–4088, doi:10.1175/JAS-D-13-016.1.

- 2012 9) Smith, R.B., **J.R. Minder**, A.D. Nugent, D.J. Kirshbaum, T. Storelvmo, R. Warren, Neil Lareau, P. Palany, A. James, and J. French, 2012: Orographic precipitation in the tropics: The Dominica Experiment. *Bulletin of the American Meteorological Society*, **93 (10)**, 1567–1579, doi:10.1175/BAMS-D-11-00194.1.
- 2011 8) **Minder, J. R.**, D. R. Durran, and G. H. Roe, 2011: Mesoscale controls on the mountainside snow line. *Journal of the Atmospheric Sciences*, **68 (9)**, 2107–2127, doi: 10.1175/JAS-D-10-05006.1.
- 2010 7) **Minder, J. R.**, P. W. Mote, and J. D. Lundquist, 2010: Surface temperature lapse rates over complex terrain: Lessons from the Cascade Mountains. *Journal of Geophysical Research: Atmospheres*, **115 (D14)**, doi:10.1029/2009JD013493.
- 2010 6) Lundquist, J., **J.R. Minder**, P. Neiman, and E. Sukovich, 2010: Relationships between barrier jet heights, precipitation distributions, and streamflow in the northern Sierra Nevada. *Water Resources Research*, **11 (5)**, 1141–1156, doi:10.1175/2010JHM1264.1.
- 2010 5) **Minder, J.R.**, 2010: The sensitivity of mountain snowpack accumulation to climate warming. *Journal of Climate*, **23 (10)**, 2634–2650, doi:10.1175/2009JCLI3263.1.
- 2009 4) **Minder, J.R.**, G. Roe, and D. Montgomery, 2009: Spatial patterns of rainfall and shallow landslide susceptibility. *Water Resources Research*, **45**, doi:10.1029/2008WR007027.
- 2008 3) **Minder, J.R.**, D. Durran, G. Roe, and A. Anders, 2008: The climatology of small-scale orographic precipitation over the Olympic Mountains: Patterns and processes. *Quarterly Journal of the Royal Meteorological Society*, **134 (633)**, 817–839, doi:10.1002/qj.258.
- 2007 2) 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. *Journal of Hydrometeorology*, **8 (5)**, 1068–1081, doi: 10.1175/JHM610.1.
- 2004 1) McAdoo, B. G., M. K. Capone, and **J. Minder**, 2004: Seafloor geomorphology of convergent margins: Implications for Casadia seismic hazard. *Tectonics*, **23 (6)**, doi:10.1029/2003TC001570.

*Published (Non-Refereed)*

- 2011 • **Minder, J.R.**, and G.H. Roe, 2011: Orographic Precipitation, In *The Encyclopedia of Snow, Ice, and Glaciers*. Ed. V.P. Singh, P. Singh, and U.K. Haritashya, Springer Press.

SELECTED  
PRESENTATIONS

Student authors from Minder research group are underlined.

*Invited*

- 2018 • **Minder, J. R.**, Nov. 2018: Towards improved understanding & prediction of intense lake-effect snowstorms, *Atmospheric & Oceanic Sciences Seminar*. McGill University, Montreal, QB, Canada,
- 2017 • **Minder, J. R.**, Mar. 2017: Extreme snow: Experiments to improve understanding and prediction of intense lake-effect snow storms, *Earth & Atmospheric Science Seminar*. City College of New York, New York, NY.
- 2015 • **Minder, J.R.**, T. Letcher, Dec. 2015: An Evaluation of High-Resolution Regional Climate Model Simulated Snow Cover Using Satellite Data (With Implications for the Simulated Snow-Albedo Feedback). *American Geophysical Union–Fall Meeting*, San Francisco, CA.
- 2014 • **Minder, J.R.**, T. Letcher, R.M. Rasmussen, K. Ikeda, C. Liu, Sep. 2014: The role of the snow-albedo feedback in simulated regional climate change over the Rocky Mountains. *MTNCLIM 2014*, Midway, Utah.

- 2011 • **Minder, J.R.**, Sep. 2011: How mountains shape their own snow-lines: Mesoscale observations, modeling, and processes. *Stony Brook University, School of Marine and Atmospheric Sciences*, Stony Brook, New York.
- 2011 • **Minder, J.R.**, R.B. Smith, A.D. Nugent, and D.J. Kirshbaum, Dec. 2011: The role of ascent–forced convection in orographic precipitation: Results from the DOMEX field campaign. *American Geophysical Union–Fall Meeting*, San Francisco, CA.

*Contributed*

- 2018 • **Minder, J. R.**, 2018: Convection-permitting simulations lake-effect snowfall response to climate change: Understanding and constraining uncertainties associated with surface and boundary layer turbulence. *2nd GEWEX Convection-Permitting Climate Modeling workshop*, GEWEX, Boulder, CO.
- 2018 • **Minder, J. R.**, 2018: Exploring elevation-dependent climate warming since the last glacial maximum over the mountains of East Africa using semi-idealized regional climate model experiments. *18th Conference on Mountain Meteorology*, American Meteorological Society, Santa Fe, NM.
- 2018 • Wallace, B.C., **J. R. Minder**, 2018: The Simulated Impact of the Snow-Albedo and Soil Moisture Feedbacks on Convective Precipitation within the Rocky Mountains under Climate Warming. *18th Conference on Mountain Meteorology*, American Meteorological Society, Santa Fe, NM.
- 2018 • Rojas, Y., **J. R. Minder**, R. Garreaud, L. Campbell, 2018: Characteristics of the Orographic Precipitation Observed by Profiling Radar during the Chilean Orographic and Mesoscale Precipitation Study over the Southern Andes Mountain Range. *18th Conference on Mountain Meteorology*, American Meteorological Society, Santa Fe, NM.
- 2018 • Bartolini, W.M., **J. R. Minder**, C. S. Schwartz, D. Keyser, and R. D. Torn, 2018: Multiscale Frontal Circulations during the 6–8 January 2014 Lake-Effect Snow Event: Understanding their Superposition and Predictability using Convection-Permitting Ensemble Forecasts. *129th Conference on Weather Analysis and Forecasting*, American Meteorological Society, Denver, CO.
- 2018 • **Minder, J. R.**, Bartolini, W. M., 2018: Characterizing and constraining uncertainties in convection permitting simulations lake-effect snowfall associated with parameterization of surface fluxes. *8th GEWEX Open Science Conference*, GEWEX, Canmore, AB, Canada.
- 2017 • **Minder, J. R.**, Letcher, T. W., Jul. 2017: The simulated impact of the snow albedo feedback on the Rocky Mountain Front Range mountain-plain circulation under climate change. *17th Conference on Mesoscale Processes*, American Meteorological Society, San Diego, CA.
- 2017 • Bartolini, W. M., **Minder, J. R.**, Keyser, D., Torn, R. D., Jul. 2017: An Analysis of Microphysics Scheme Performance in Numerical Simulations of the Lake-Effect Snow Event of 10–12 December 2013 during the OWLeS Field Campaign. *17th Conference on Mesoscale Processes*, American Meteorological Society, San Diego, CA.
- 2017 • Bartolini, W. M., **Minder, J. R.**, Keyser, D., Torn, R. D., Mar. 2017: An analysis of microphysics scheme performance in numerical simulations of the lake-effect snow event of 10–12 December 2013 during the Ontario Winter Lake-effect Systems field campaign. *Forty-Second Annual Northeastern Storm Conference*, Lyndon State College Student Chapter of the American Meteorological Society and National Weather Association, Saratoga Springs, NY.
- 2017 • Brotzge, J. A., Thorncroft, C. D., Joseph, E., Miller, S., Min, Q., **Minder, J. R.**, Freedman, J., Jan. 2017: The New York State Mesonet: Profiler, Snow, and Flux Networks. *97th American Meteorological Society Annual Meeting, American Meteorological Society*, Seattle, Washington.

- 2017 • Campbell, L., Garreaud, R., **Minder, J. R.**, Steenburgh, W. J., Jan. 2017: The Chilean Orographic and Mesoscale Precipitation Study (CHOMPS): Field Program Description and Initial Results. *97th American Meteorological Society Annual Meeting*, Americal Meteorological Society, Seattle, Washington.
- 2016 • **Minder, J. R.**, Letcher, T. W., Liu, C., Dec. 2016: Mechanisms of elevation-dependent warming over complex terrain in high-resolution simulations of regional climate change. *49th Annual American Geophysical Union Fall Meeting*, American Geophysical Union, San Francisco, CA.
- 2016 • Letcher, T. W., **Minder, J. R.**, Dec. 2016: The Simulated Response of Mountain Breeze Circulations to Regionally Enhanced Warming Caused by the Snow Albedo Feedback. *49th Annual American Geophysical Union Fall Meeting*, American Geophysical Union, San Francisco, CA.
- 2016 • **Minder, J. R.**, Sep. 2017: Diagnosing and evaluating the snow-albedo feedback over complex terrain in high-resolution regional climate change simulations. *GEWEX Convection-Permitting Climate Modeling Workshop*, Global Energy and Water Cycle Exchanges Project (GEWEX), Boulder, CO.
- 2016 • **Minder, J. R.**, Letcher, T. W., Skiles, S. M., Jul. 2016: An Evaluation of High-Resolution Regional Climate Model Simulations of Mountain Snow Cover and Albedo (With Implications for the Simulated Snow-Albedo Feedback). *17th Conference on Mountain Meteorology*, American Meteorological Society, Burlington, VT.
- 2016 • Massmann, A. K., **Minder, J. R.**, Kingsmill, D. E., Garreaud, R., Montecinos, A., Snider, J., Fults, S., Valenzuela, R., Falvey, M., Jul. 2016: The Chilean Coastal Orographic Precipitation Experiment Pilot Project (CCOPE-2015): Overview and Preliminary Results. *17th Conference on Mountain Meteorology*, American Meteorological Society, Burlington, VT.
- 2016 • Letcher, T. W., **Minder, J. R.**, Jul. 2016: The Response of Mountain Breeze Circulations to Regionally Enhanced Warming Caused by the Snow Albedo Feedback. *17th Conference on Mountain Meteorology*, American Meteorological Society, Burlington, VT.
- 2016 • **Minder, J. R.**, Letcher, T. W., Jun. 2016: Understanding the Elevation-Dependence of Climate Warming over Complex Terrain in High-Resolution Simulations of Regional Climate Change. *17th Conference on Mountain Meteorology*, American Meteorological Society, Burlington, VT.
- 2016 • Brotzge, J. A., Thorncroft, C. D., Joseph, E., Farruggio, N., Perez, S., Kane, E., Flamholtz, W., Soroka, S., Naple, P., Miller, S., **Minder, J. R.**, Wang, J., Drum, A., Gallagher, A., Jan. 2016: The New York State Mesonet: Siting Process and Challenges. *96th American Meteorological Society Annual Meeting*, American Meteorological Society, New Orleans, LA.
- 2015 • **Minder, J.R.**, A.K. Massmann, S. Fults, D. Kingsmill, J. Snider, R. Garreaud, A. Montecinos, R. Valenzuela, M. Falvey, B. Geerts, Dec. 2015: The Chilean Coastal Orographic Precipitation Experiment Pilot Project (CCOPE-2015): Overview and Preliminary Results. *American Geophysical Union Fall Meeting*, San Francisco, CA.
- 2015 • Letcher, T., **J.R. Minder**, Dec. 2015: Using High Resolution Regional Climate Models to Quantify the Snow Albedo Feedback in a Region of Complex Terrain. *American Geophysical Union Fall Meeting*, San Francisco, CA.
- 2015 • **Minder, J.R.**, T. Letcher, 2015: Characterization of the Simulated Regional Snow-Albedo Feedback Using a Regional Climate Model over Complex Terrain. *International Conference on Alpine Meteorology*, Innsbruck, Austria.
- 2015 • **Minder, J.R.**, T. Letcher, L. Campbell, P.G. Veals, J. Steenburgh, 2015: The inland evolution of lake-effect convection during landfall and orographic uplift as observed by profiling radars during OWLeS. *16th Conference on Mesoscale Processes*, American Meteorological Society, Boston, MA.

- 2015 • Massmann, A.K., **J.R. Minder**, 2015: Utilizing a Semi-idealized Modeling Framework to Understand Meso- and Convective-scale dynamics of severe Lake-effect Snowstorms. *16th Conference on Mesoscale Processes*, American Meteorological Society, Boston, MA.
- 2014 • **Minder, J.R.**, T. Letcher, J. Steenburgh, P.G. Veals, L. Campbell, 2014: Modification of long-axis lake-effect snow bands associated with landfall and orographic uplift: Results from a profiling radar network deployed during OWLeS. *16th Conference on Mountain Meteorology*, American Meteorological Society, San Diego, CA.
- 2014 • Letcher, T., **J.R. Minder**, R.M. Rasmussen, K. Ikeda, C. Liu, 2014: Quantification of the snow albedo feedback in regional climate model simulations over the Rocky Mountains. *16th Conference on Mountain Meteorology*, American Meteorological Society, San Diego, CA.
- 2013 • **Minder, J.R.**, 2013: An overview of the Ontario Winter Lake-effect Systems (OWLeS) campaign: winter 2013-14. *Northeast Regional Operational Workshop XIV*, Albany, NY.
- 2013 • **Minder, J.R.**, R.B. Smith, 2013: Dominica's Downslope Winds: Morphology & Dynamics of a Plunging Downslope Flow in the Tropics. *15th Conference on Mesoscale Processes*, American Meteorological Society, Portland, OR.
- 2012 • **Minder, J.R.**, D.E. Kingsmill, 2012: Mesoscale Variations of the Atmospheric Snowline over the Northern Sierra Nevada: Climatology, Case Study, and Mechanisms. *15th Conference on Mountain Meteorology*, American Meteorological Society, Steamboat Springs, CO.
- 2012 • **Minder, J.R.**, R.B. Smith, A.D. Nugent, D.J. Kirshbaum, 2012: The Mesoscale Dynamics of Ascent-Forced Orographic Convection: Results from DOMEX. *15th Conference on Mountain Meteorology*, American Meteorological Society, Steamboat Springs, CO.
- 2011 • **Minder, J.R.**, D.E. Kingsmill, 2011: Physical controls on spatial variations of the rain-snow boundary over the northern Sierra Nevada. *American Geophysical Union-Fall Meeting*, San Francisco, CA.
- 2011 • **Minder, J.R.**, R.B. Smith, A.D. Nugent, and D.J. Kirshbaum, Aug, 2011: The influence of mesoscale airflow dynamics on orographic convection and precipitation in the tropics. *14th Conference on Mesoscale Processes*, American Meteorological Society, Los Angeles, CA.
- 2010 • **Minder, J.R.**, D.R. Durran, G.H. Roe, 2010 : Mesoscale controls on the mountainside snow line. *14th Conference on Mountain Meteorology*, American Meteorological Society, Squaw Valley, CA.
- 2009 • **Minder, J.R.**, N. Wayand, G.H. Roe, D.R. Durran, 2009: The sensitivity of mountain snowpack accumulation to climate warming. *International Conference on Alpine Meteorology*, Rastatt, Germany.
- 2008 • **Minder, J.R.**, G.H. Roe, D.R. Montgomery, 2008: Patterns of Rainfall and Landslide Hazard. *13th Conference on Mountain Meteorology*, American Meteorological Society, Whistler, BC, Canada.
- 2006 • **Minder, J.R.**, A.M. Anders, D.R. Durran, G.H. Roe, 2006: Understanding the Climatology of Small-Scale Orographic Precipitation Patterns: Progress from the Olympic Mtns. *12th Conference on Mountain Meteorology*, American Meteorological Society, Santa Fe, NM.

TEACHING  
EXPERIENCE

*Instructor, University at Albany*

2014, 2015, 2016, 2017,  
~~2018~~, 2018

- AATM 321/425Y: Physical Meteorology
- AENV 450: Special Topics in Environmental Science: The Adirondack Environment



- 2013, 2015
  - 2012, 2013, 2014
- AATM 641: Mesoscale Processes
  - AATM 301: Surface Hydrology & Hydrometeorology
  - Guest lectures for: AATM 327, UFSP 100

*Teaching Assistant, University of Washington*

- Atmos. Sci. 587: Climate Dynamics
- Atmos. Sci. 101: Weather

2004 Teaching Intern, Vassar College HHMI program, FDR High School, Hyde Park, NY

## STUDENTS ADVISED

### *Graduate students*

(\* = primary advisor, + = PhD committee member, # = MS thesis reader)

Fall 2017 – present	<b>Yazmina Rojas*</b> (PhD student)
Fall 2016 – present	<b>Brendan Wallace*</b> (PhD student)
Fall 2016 – present	<b>W. Massey Bartolini*</b> (PhD student)
Fall 2014 – May 2016	<b>Adam Massmann*</b> (MS) <i>Currently a PhD student in Environmental Engineering at Columbia University</i>
Fall 2013 – May 2017	<b>Theodore Letcher*</b> (PhD) <i>Currently a Research Scientist at Cold Region Research and Engineering Lab</i>
Aug. 2018 – present	Lauriana Gaudet + (PhD student)
May 2018 – present	Vanessa Przybylo + (PhD student)
Mar. 2018 – present	Kevin Lupo + (PhD student)
Mar. 2017 – present	Alexander Gallagher + (PhD student)
Sep. 2015 – May 2016	Hannah Huelsing# (MS)
2016 – 2018	Oscar Chimborazo + (PhD)
Fall 2015 – Jan 2018	Geng Xia+ (PhD)
Jan. 2016 – Dec. 2018	Peter Veals+ (PhD– University of Utah)
May 2014 – Jul. 2017	Leah Campbell+ (PhD– University of Utah)

### *Undergraduate (research)*

Summer 2018 – present	Terry Allard
Fall 2017 – Spring 2018	Marqi Rocque
Summer 2017 – Spring 2018	Matthew Brewer <i>Currently San Jose State Univ. MS student</i>
Fall 2015 – Spring 2016	Amanda Colley
Spring 2015	Patrick Naple <i>Currently employed by NY State Mesonet</i>
Fall 2013 –Spring 2014	Alexander Gallagher <i>Currently UAlbany PhD student</i>

### *Undergraduate (academic)*

Fall 2012–present Advise 4-8 students (numbers fluctuate). Annual transfer advising.

## SERVICE

### *Department*

Mar. 2017–present	• Committee Member, Atmospheric & Environmental Sciences Inclusion and Diversity Committee
Jun. 2015–present	• Committee Member, Atmospheric & Environmental Sciences Undergraduate Committee
Jul. 2017	• Presenter, Atmospheric and Environmental Sciences workshop for high school teachers
Aug. 2013 – Jun. 2015	• Committee Member, Atmospheric & Environmental Sciences Graduate Committee

- Aug. 2013 – Feb. 2014 • Committee Member, Atmospheric & Environmental Sciences Faculty Search Committee

#### *University*

- 2016–present • UAlbany Faculty Senate Council on Research (CoR)  
*Chair of Conference/Journal Support Award review subcommittee (2016–2018), Member of FRAP-A Award review subcommittee (2016), Chair of FRAP-A Award review subcommittee (2018)*
- May 2016, 2017 • Guest Speaker, NSF CAREER Proposal Writing Workshop
- Apr. 2013, 2014, 2015, 2016, 2017 • Participant, UAlbany Family Earth Day event  
*Provided weather balloon launch demonstrations*
- Nov. 2016 • Grant proposal reviewer, PIFRS
- Apr. 2014 – Apr. 2015 • Subcommittee Member, New York State Mesonet: Site Survey and Site Standards Subcommittee
- Apr. 2014 – Apr. 2015 • Subcommittee Member, New York State Mesonet: Site Selection Subcommittee
- Apr. 2014 – Apr. 2015 • Subcommittee Member, New York State Mesonet: Parameters and Instrumentation Subcommittee
- Oct. 2013 • Panelist, ITLAL panel on “Demystifying the Academic Job Market”

#### *Professional*

- 2013–present • American Meteorological Society Committee on Mountain Meteorology  
*Committee member from Jan. 2013–Jan. 2018. Elected committee chair for term spanning Jan. 2018–Jan. 2021.*
- 2015–present • Associate Editor, *Monthly Weather Review*
- 2008–present • Journal article reviewer for:  
*Bulletin of the American Meteorological Society; Geophysical Research Letters; Journal of the Atmospheric Sciences; Monthly Weather Review; Quarterly Journal of the Royal Meteorological Society; Weather and Forecasting; Water Resources Research; Climatic Change; Journal of Applied Meteorology and Climatology; Journal of Hydrometeorology; Australian Meteorological and Oceanographic Journal; International Journal of Climatology; Remote Sensing; Journal of Atmospheric and Solar-Terrestrial Physics; Arctic, Antarctic, and Alpine Research; Journal of Operational Meteorology; Physics Today; Great Lakes Research*
- 2011–present • Grant proposal reviewer for:  
*National Science Foundation; Austrian Academy of Sciences*
- 2014, 2015, 2017 • Instructor for KMA/COMET Olympic Forecaster Training Course  
*Gave half-day lectures on forecasting winter precipitation type over complex terrain to South Korean forecasters preparing for the 2018 Pyeongchang Winter Olympics.*
- 2013–2016 • Session chair for:  
*16th & 17th AMS Conferences on Mountain Meteorology, 15th & 16th AMS Conferences on Mesoscale Processes*

#### *Community*

- 2015–2018 • University at Albany Weather & Climate Camp: Albany, NY  
(<http://www.atmos.albany.edu/facstaff/jminder/UAWCcamp/>)  
*Creator and director of NSF-funded annual week-long summer science camp for high school students from low-income urban districts.*
- 2005–present • Guest speaker on weather & climate at K-12 schools  
*As many as twenty-four outreach talks per year*
- Aug. 2016 • Speaker for Friends of the Albany Public Library  
*Book review of “The Brothers Vonnegut: Science and Fiction in the House of Magic”*
- Apr. 2016 • Speaker at New York State Balloon Association’s Safety Seminar  
*Hour-long lecture on “Weather awareness and forecasting for balloonists”.*

2006–2010

- Youth Tutoring Program  
*Tutored low-income elementary and high school students weekly*

2004–2010

- Program on Climate Change outreach group & Atmospheric Sciences Department outreach group, University of Washington

#### PROFESSIONAL AFFILIATIONS

- American Geophysical Union
- American Meteorological Society

#### TECHNICAL SKILLS

- Software  
*Python, Matlab, NCL, Perl, LaTeX, FORTRAN, Mesoscale atmospheric models (WRF, MM5, CM1)*
- Weather and climate instrumentation & data analysis  
*precipitation gauges, anemometer towers, precipitation distrometers (Joss-Waldvogel, PARSIVEL), in situ aircraft observations (University of Wyoming King Air), precipitation and cloud radars (Micro Rain Radar, NEXRAD, Wyoming Cloud Radar, XPR), polar-orbiting satellite (MODIS)*