

Jason C. Furtado | Ph.D.

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EDUCATION

- 2010** **Georgia Institute of Technology**
Ph.D. - Earth and Atmospheric Sciences
Graduate Certificate in Public (Environmental) Policy
Dissertation - On the Uncertainties and Dynamics of Pacific Interannual and Decadal Climate Variability and Climate Change
Advisor - Emanuele Di Lorenzo
- 2005** **Colorado State University**
M.S. - Atmospheric Science
Thesis - On the Balanced Response of the Troposphere to Variability in the Extratropical Stratosphere
Advisor - David W. J. Thompson
- 2002** **Lyndon State College (Now: Northern Vermont University at Lyndon)**
B.S. - Meteorology & B.S. - Mathematics

PROFESSIONAL APPOINTMENTS

- 2015 –** **University of Oklahoma**
Associate Professor, School of Meteorology (2021 –)
Fellow, Cooperative Institute for Severe & High-Impact Weather Research & Operations (2021 –)
Affiliate Faculty, School of Psychology (2016 –)
Affiliate, South Central Climate Adaptation and Science Center (2015 –)
Assistant Professor, School of Meteorology (2015 – 2021)
- 2014 – 2015** **Boston University**
Lecturer, Department of Earth and Environment
- 2011 – 2015** **Atmospheric and Environmental Research**
Staff Scientist, Climate Analysis Branch

REFEREED PUBLICATIONS

* - Student Author

IN PREPARATION

- Di Lorenzo, E., B. T. Anderson, A. Capotondi, **J. C. Furtado**, E. Guderian, Y. Joh, G. Liguori, A. J. Miller, G. Navarra, M. Newman, N. Schneider, S. Stevenson, D. Vimont, T. Xu, and Z. Zhao, 2022: Mechanisms and modes of Pacific decadal-scale variability. *Ann. Rev. Marine Sci.*, in prep.
- **Furtado, J. C.**, B. T. Anderson, and M. H. Rogers*, 2022: Influence of the Pacific Decadal Precession on North American climate extremes. *J. Geophys. Res. Atmos.*, in prep.

UNDER REVIEW

- Cohen, J., L. Agel, M. Barlow, **J. C. Furtado**, M. Kretschmer, and V. Matthias, 2022: The "Polar Vortex" Winter of 2013/14. *J. Geophys. Res. Atmos.*, under review.
- Lee, S. H.*, A. J. Charlton-Perez, S. J. Woolnough, and **J. C. Furtado**, 2022: How does the stratosphere influence North American winter weather regimes? *J. Climate*, conditionally accepted pending major revisions.
- Millin, O. T.*, **J. C. Furtado**, and J. B. Basara, 2022: Characteristics, evolution, and formation of cold air outbreaks in the Great Plains of the United States. *J. Climate*, conditionally accepted pending major revisions.
- Zekavat, S., F. Afghah, R. Askari, J. Delabrouille, N. French, **J. C. Furtado**, S. Hanany, and V. Lubecke, 2022: Electromagnetic spectrum contribution in astronomy, health, atmospheric, geology, and environment applications. *Intl. J. Wire. Info.*, under review.

PUBLISHED

2021

1. Rogers, M. H.*, **J. C. Furtado**, and B. T. Anderson, 2021: Representation of the Pacific Decadal Precession in the CMIP6 models. *Climate Dyn.*, accepted.
2. Christian, J. I.*, J. B. Basara, E. D. Hunt, J. A. Otkin, **J. C. Furtado**, R. Randall, V. Mishra, M. D. Svoboda, and N. Klingaman, 2021: Global distribution and trends of flash drought occurrence. *Nature Comm.*, **12**, 6330, <https://doi.org/10.1038/s41467-021-26692-z>.
3. Wakefield, R. A., J. B. Basara, J. M. Shepherd, N. Brauer, J. A. Santanello, Jr., and **J. C. Furtado**, 2021: The inland maintenance and re-intensification of Tropical Storm Bill (2015) Part 1: Contributions of the Brown Ocean Effect. *J. Hydrometeor.*, <https://doi.org/10.1175/JHM-D-20-0150.1>.

4. Dickinson, T. A.*, M. B. Richman, and **J. C. Furtado**, 2021: Subseasonal to seasonal extreme precipitation events in the contiguous United States: Generation of a database and climatology. *J. Climate*, **34**, 7571–7586, <https://doi.org/10.1175/JCLI-D-20-0580.1>.
5. **Furtado, J. C.**, J. Cohen, E. Becker, and D. Collins, 2021: Evaluating the relationship between sudden stratospheric warmings and tropospheric weather regimes in the NMME Phase-2 models. *Climate Dyn.*, <https://doi.org/10.1007/s00382-020-05591-x>.

2020

1. Lee, S. H.*, A. J. Charlton-Perez, **J. C. Furtado**, and S. J. Woolnough, 2020: Representation of the Scandinavia-Greenland dipole and its relationship with the polar vortex in S2S forecast models. *Quart. J. Roy. Meteor. Soc.*, **146**, 4083–4098, <https://doi.org/10.1002/qj.3892>.
2. Flournoy, M. D.*, M. C. Coniglio, E. N. Rasmussen, and **J. C. Furtado**, 2020: Modes of storm-scale variability and tornado potential in VORTEX2 near- and far-inflow tornadic environments. *Mon. Wea. Rev.*, **148**, 4185–4207, <https://doi.org/10.1175/MWR-D-20-0147.1>.
3. Jennrich, G. C.*, **J. C. Furtado**, J. Basara, and E. R. Martin, 2020: Synoptic characteristics of 14-day extreme precipitation events across the United States. *J. Climate*, **33**, 6423–6440, <https://doi.org/10.1175/JCLI-D-19-0563.1>.
4. Pegion, K., C. M. Selman, S. Larson, **J. C. Furtado**, and E. J. Becker, 2020: The impact of the extratropics on ENSO diversity and predictability. *Climate Dyn.*, **54**, 4469–4484, <https://doi.org/10.1007/s00382-020-05232-3>.
5. Domeisen, D. I., A. H. Butler, A. J. Charlton-Perez, B. Ayarzagüena, M. P. Baldwin, E. Dunn-Sigouin, **J. C. Furtado**, C. I. Garfinkel, P. Hitchcock, A. Y. Karpechko, J. Knight, A. Lang, E.-P. Lim, Y. Lim, A. Marshall, C. Schwartz, I. R. Simpson, S.-W. Son, K. Song, and M. Taguchi, 2020: The role of stratosphere - troposphere coupling in sub-seasonal to seasonal prediction: 2. Predictability arising from stratosphere - troposphere coupling. *J. Geophys. Res. Atmos.*, **125**, e2019JD030923, <https://doi.org/10.1029/2019JD030923>.
6. Domeisen, D. I., A. H. Butler, A. J. Charlton-Perez, B. Ayarzagüena, M. P. Baldwin, E. Dunn-Sigouin, **J. C. Furtado**, C. I. Garfinkel, P. Hitchcock, A. Y. Karpechko, J. Knight, A. Lang, E.-P. Lim, Y. Lim, A. Marshall, C. Schwartz, I. R. Simpson, S.-W. Son, K. Song, and M. Taguchi, 2020: The role of stratosphere - troposphere coupling in sub-seasonal to seasonal prediction: 1. Predictability in the stratosphere. *J. Geophys. Res. Atmos.*, **125**, e2019JD030920, <https://doi.org/10.1029/2019JD030920>.

2019

1. Lee, S. H.*, **J. C. Furtado**, and A. J. Charlton-Perez, 2019: Wintertime North American weather regimes and the Arctic stratospheric polar vortex. *Geophys. Res. Lett.*, **46**, 14892–14900, <https://doi.org/10.1029/2019GL085592>.
2. Green, M. R.*, and **J. C. Furtado**, 2019: Evaluating the joint influence of the Madden-Julian Oscillation and the stratospheric polar vortex on weather patterns across the Northern Hemisphere. *J. Geophys. Res. Atmos.*, **124**, 11693–11709, <https://doi.org/10.1029/2019JD030771>.

3. You, Y.* and **J. C. Furtado**, 2019: The relationship between South Pacific atmospheric internal variability and ENSO in the NMME Phase-II Models. *Geophys. Res. Lett.*, **46**, 12398–12407, <https://doi.org/10.1029/2019GL084637>.
4. Barnes, E. A., S. Samarasinghe*, I. Ebert-Uphoff, and **J. C. Furtado**, 2019: Tropospheric and stratospheric causal pathways between the MJO and NAO. *J. Geophys. Res. Atmos.*, **124**, 9356–9371, <https://doi.org/10.1029/2019JD0310254>.
5. Flanagan, P. X.*, J. B. Basara, **J. C. Furtado**, E. R. Martin, and X. Xiao, 2019: Role of Pacific sea surface temperatures in forcing circulation anomalies driving United States Great Plains pluvial years. *J. Climate*, **32**, 7081–7100, <https://doi.org/10.1175/JCLI-D-18-0726.1>.
6. Lee, S. H.*, A. J. Charlton-Perez, **J. C. Furtado**, and S. J. Woolnough, 2019: Abrupt stratospheric vortex weakening associated with North Atlantic anticyclonic wave breaking. *J. Geophys. Res. Atmos.*, **124**, 8563–8575, <https://doi.org/10.1029/2019JD030940>.
7. Kuster, C. M., J. C. Snyder, T. J. Schuur, T. Lindley, P. L. Heinselman, **J. C. Furtado**, J. W. Brogden, and R. Toomey, 2019: Rapid-update radar observations of ZDR column depth and its use in the warning decision process. *Wea. Forecasting*, **34**, 1173–1188, <https://doi.org/10.1175/WAF-D-19-0024.1>.
8. Wakefield, R. A.*, J. B. Basara, **J. C. Furtado**, B. G. Illston, C. R. Ferguson, and P. Klein, 2019: A modified framework for quantifying land-atmosphere covariability during hydrometeorological and soil wetness extremes in Oklahoma. *J. Meteor. Appl. Climatol.*, **58**, 1465–1483, <https://doi.org/10.1175/JAMC-D-18-0230.1>.

2018

1. You, Y.* and **J. C. Furtado**, 2018: The South Pacific Meridional Mode and its role in tropical Pacific climate variability. *J. Climate*, **31**, 10141–10163, <https://doi.org/10.1175/JCLI-D-17-0860.1>.
2. Henderson, G. R., Y. Peings, **J. C. Furtado**, and P. Kushner, 2018: Snow-atmosphere coupling in the Northern Hemisphere. *Nature Climate Change*, **8**, 954–963, <https://doi.org/10.1038/s41558-018-0295-6>.
3. Flanagan, P. X.*, J. B. Basara, **J. C. Furtado**, and X. Xiao, 2018: Primary atmospheric drivers of pluvial years in the United States Great Plains. *J. Hydrometeor.*, **19**, 643–658, <https://doi.org/10.1175/JHM-D-17-0148.1>.

2017

1. You, Y.* and **J. C. Furtado**, 2017: The role of South Pacific atmospheric variability in the development of different types of ENSO. *Geophys. Res. Lett.*, **44**, 7438–7446, doi:10.1002/2017GL073475.
2. Anderson, B. T., **J. C. Furtado**, D. J. S. Gianotti*, and E. Di Lorenzo, 2017: Tracking the Pacific Decadal Precession. *J. Geophys. Res. Atmos.*, **122**, 3214–3227, doi:10.1002/2016JD02596.

2016

1. Anderson, B. T., D. J. S. Gianotti*, G. Salvucci, and **J. C. Furtado**, 2016: Dominant timescales of potentially predictable precipitation variations across the continental United States. *J. Climate*, **29**, 8881–8897, doi:10.1175/JCLI-D-15-0635.1.
2. **Furtado, J. C.**, J. Cohen, and E. Tziperman, 2016: The combined influences of autumnal snow and sea ice on Northern Hemisphere winters. *Geophys. Res. Lett.*, **43**, doi:10.1002/2016GL068108.
3. Anderson, B. T., D. J. S. Gianotti*, **J. C. Furtado**, and E. Di Lorenzo, 2016: A decadal precession of atmospheric pressures over the North Pacific. *Geophys. Res. Lett.*, **43**, 3921–3927, doi:10.1002/2016GL068206.

2015

1. Di Lorenzo, E., G. Liguori*, N. Schneider, **J. C. Furtado**, B. T. Anderson, and M. A. Alexander, 2015: ENSO and meridional modes: A null hypothesis for Pacific climate variability. *Geophys. Res. Lett.*, **42**, 9440–9448, doi:10.1002/2015GL066281.
2. **Furtado, J. C.**, J. L. Cohen, A. H. Butler, E. E. Riddle, and A. Kumar, 2015: Eurasian snow cover variability and links to winter climate in the CMIP5 models. *Climate Dyn.*, **45**, 2591–2605, <https://doi.org/10.1007/s00382-015-2494-4>.

2014

1. Cohen, J., J. A. Screen, **J. C. Furtado**, M. Barlow, D. Whittleston*, D. Coumou, J. Francis, K. Dethloff, D. Entekhabi, J. Overland, and J. E. Jones, 2014: The relationship between recent Arctic Amplification and extreme mid-latitude weather. *Nature Geoscience*, **7**, 627–637, <https://doi.org/10.1038/ngeo2234>.
2. Cohen, J., **J. C. Furtado**, J. Jones, M. Barlow, D. Whittleston*, and D. Entekhabi, 2014: Linking Siberian snow cover to precursors of stratospheric variability. *J. Climate*, **27**, 5422–5432, <https://doi.org/10.1175/JCLI-D-13-00779.1>.

2013

1. Di Lorenzo, E., V. Combes, J. E. Keister, T. P. Strub, A. C. Thomas, P. J. S. Franks, M. D. Ohman, **J. C. Furtado**, A. Bracco, S. J. Bograd, W. T. Peterson, F. B. Schwing, S. Chiba, B. Taguchi, S. Hormazabal, and C. Parada, 2013: Synthesis of Pacific Ocean climate & ecosystems dynamics. *Oceanography*, **26**, 68–81, <http://dx.doi.org/10.5670/oceanog.2013.76>.
2. Cohen, J. L., J. Jones, **J. C. Furtado**, and E. Tziperman, 2013: Warm Arctic, cold continents: A common pattern related to Arctic sea ice melt, snow advance, and extreme winter weather. *Oceanography*, **26**, 150–160, <http://dx.doi.org/10.5670/oceanog.2013.70>.
3. Anderson, B. T., **J. C. Furtado**, K. M. Cobb and E. Di Lorenzo, 2013: Extratropical forcing of El Niño/Southern Oscillation asymmetry. *Geophys. Res. Lett.*, **40**, 4916–4921, doi:10.1002/grl.50951.

4. Riddle, E. E., A. H. Butler, **J. C. Furtado**, J. L. Cohen, and A. Kumar, 2013: CFSv2 ensemble prediction of the wintertime Arctic Oscillation. *Climate Dyn.*, **41**, 1099–1116, <https://doi.org/10.1007/s00382-013-1850-5>.

2012

1. **Furtado, J. C.**, E. Di Lorenzo, B. T. Anderson, and N. Schneider, 2012: Linkages between the North Pacific Oscillation and central tropical Pacific SSTs at low frequencies. *Climate Dyn.*, **39**, 2833–2846, <https://doi.org/10.1007/s00382-011-1245-4>.
2. Cohen, J., **J. C. Furtado**, M. A. Barlow, V. A. Alexeev, and J. C. Cherry, 2012: Asymmetric seasonal temperature trends. *Geophys. Res. Lett.*, **39**, L04705, doi: 10.1029/2011GL050582.
3. Cohen, J., **J. C. Furtado**, M. A. Barlow, V. A. Alexeev, and J. C. Cherry, 2012: Arctic warming, increasing snow cover, and widespread boreal winter cooling. *Env. Res. Lett.*, **7**, 014007, doi: 10.1088/1748-9326/7/1/014007.

2011

1. **Furtado, J. C.**, E. Di Lorenzo, N. Schneider, and N. Bond 2011: North Pacific decadal variability and climate change in the IPCC AR4 models. *J. Climate*, **24**, 3049–3067, <https://doi.org/10.1175/2010JCLI3584.1>.

2010

1. Di Lorenzo, E., K. M. Cobb, **J. C. Furtado**, N. Schneider, B. Anderson, A. Bracco, M. A. Alexander, and D. Vimont, 2010: Central Pacific El Niño and decadal climate change in the North Pacific. *Nature Geoscience*, **3**, 762–765, <https://doi.org/10.1038/ngeo984>

2009

1. **Furtado, J. C.**, E. Di Lorenzo, K. M. Cobb, and A. Bracco, 2009: Paleoclimate reconstructions of tropical sea surface temperatures from precipitation proxies: Methods, uncertainties and nonstationarity. *J. Climate*, **22**, 1104–1123, <https://doi.org/10.1175/2008JCLI2415.1>.

2006

1. Thompson, D. W. J., **J. C. Furtado**, and T. G. Shepherd, 2006: On the tropospheric response to anomalous stratospheric wave drag and radiative heating. *J. Atmos. Sci.*, **63**, 2616–2629, <https://doi.org/10.1175/JAS3771.1>.

NON-REFEREED PUBLICATIONS

2019

1. **Furtado, J. C.**, 2019: Links between autumn snow cover and sea ice extent and Northern Hemisphere wintertime climate variability. *U.S. CLIVAR Variations*, Spring 2019 Edition, 12–19, <https://indd.adobe.com/view/boe5a374-5321-4058-a31d-4b2130ac765e>.

2018

1. **Furtado, J. C.**, 2018: Look south, ENSO forecasters! NOAA ENSO Blog. <https://www.climate.gov/news-features/blogs/enso/look-south-enso-forecasters>.

2015

1. Cohen, J. and **J. C. Furtado**, 2015: How climate change may be producing more blockbuster snowstorms. Guest article. Capital Weather Gang / The Washington Post. <https://www.washingtonpost.com/news/capital-weather-gang/wp/2015/03/09/how-climate-change-may-be-producing-more-blockbuster-snowstorms/>.

2011

1. **Furtado, J. C.**, and E. Di Lorenzo, 2011: Pacific climate variability in IPCC coupled climate models. In PICES Scientific Report No. 40: Report of Working Group 20 on Evaluations of Climate Change Projections, 165 pp.

INVITED TALKS

2021

1. **[29 September 2021]** "How a Warming Arctic and Climate Change May Be Impacting Extreme Winter Weather." American Clean Power Resource and Project Energy Assessment Virtual Summit. Webinar.
2. **[5 August 2021]** "A Warming Arctic: How Climate Change May Impact Future Winter Weather." 26th Annual Inter-Tribal Environmental Council Conference. Webinar.
3. **[9 March 2021]** "Bundle Up! Extreme Winter Weather in a Warming World." Texas Tech Climate Science Center. Webinar.
4. **[29 January 2021]** "A Warming Arctic: How Climate Change May Impact Future Winter Weather." South Central Climate Adaptation Science Center. Webinar.

2019

1. **[22 November 2019]** "Looking to the South Pacific to Improve ENSO Predictability." University of Reading, Department of Meteorology, Reading, UK.

2. **[19 June 2019]** "The Role of the South Pacific in Tropical Pacific Climate Variability." University of New South Wales, Climate Change Research Centre, Sydney, NSW Australia.
3. **[11 April 2019]** "Links Between Autumn Snow Cover and Sea Ice Extent and Northern Hemisphere Wintertime Climate Variability." U.S. CLIVAR. Webinar.

2018

1. **[12 July 2018]** "Polar Vortex Variability in the NMME Phase-2 Models." NOAA CPC / NMME Task Force. Webinar.
2. **[17 May 2018]** "The Role of the South Pacific in Tropical Pacific Climate Variability." NOAA Climate Prediction Center, College Park, MD, USA.

2017

1. **[14 Nov 2017]** "The Role of the South Pacific in Tropical Pacific Climate Variability." University of Oklahoma, School of Meteorology Colloquium Series, Norman, OK, USA.

2016

1. **[11 Nov 2016]** "Tropical - North Pacific Climate Interactions on Multiple Timescales." University of Virginia, Department of Environmental Sciences, Charlottesville, VA, USA
2. **[10 Nov 2016]** "From Siberia With Love: How Autumnal Arctic Climate Variability May Influence NH Winter Weather." University of Virginia, Department of Environmental Sciences, Charlottesville, VA, USA.

2012

1. **[7 Feb 2012]** "Central Pacific Warming and the North Pacific Oscillation: A New Look at Pacific Decadal Climate Variability." NOAA Climate Prediction Centers, Camp Springs, MD, USA.

2005

1. **[14 March 2005]** "On the Balanced Response of the Troposphere to the Stratosphere." NASA GISS, New York, NY, USA.

PRESENTATIONS

* - Student Author. First author is presenter.

2021

1. Puxley, B., E. R. Martin, J. B. Basara, **J. C. Furtado**, and J. B. Christian, 2021: "Precipitation Whiplash Events Across the Southern Great Plains of the United States." American Geophysical Union Fall Meeting 2021. New Orleans, LA, USA. Poster Presentation.

2. Cohen, J., L. Agel, M. Barlow, **J. C. Furtado**, M. Kretschmer, and V. Matthias: "The Polar Vortex Winter of 2021." American Geophysical Union Fall Meeting 2021. New Orleans, LA, USA. Oral Presentation.
3. **Furtado, J. C.**, O. T. Millin, S. Cavallo, J. H. Ruppert, A. Reinert, and S. Lakshminarayanan, 2021: "Sub-seasonal Predictors of Extreme Cold Air Outbreaks in the Central US." American Geophysical Union Fall Meeting 2021. Virtual. Poster Presentation.
4. **Furtado, J. C.**, O. T. Millin, and J. B. Basara, 2021: "A Meteorological Evaluation of the February 2021 North American Cold Wave." Society for Risk Analysis Annual Meeting 2021. Virtual. Oral Presentation.
5. Millin, O. T.*, **J. C. Furtado**, and J. B. Basara, 2021: "The Differing Influence of the Stratosphere on Cold Air Outbreaks in the Great Plains of the United States." NOAA's 46th Climate Diagnostics and Prediction Workshop. Virtual. Oral Presentation.
6. Dickinson, T. A.*, M. B. Richman, and **J. C. Furtado**, 2021: "Examining the Utility of Random Forests to Forecast Subseasonal Extreme Precipitation in the Contiguous United States." NOAA's 46th Climate Diagnostics and Prediction Workshop. Virtual. Oral Presentation.
7. McAfee, D.*, E. R. Martin, and **J. C. Furtado**, 2021: "Evaluation of S2S Model Performance for Forecasting US Extreme Precipitation Events." NOAA's 46th Climate Diagnostics and Prediction Workshop. Virtual. Poster Presentation.
8. McAfee, D.*, E. R. Martin, and **J. C. Furtado**, 2021: "Regional and Seasonal Analysis of S2S Reforecast Ensemble Extreme Precipitation Event Performance With a Subseasonal-to-Seasonal Forecast Range Emphasis." American Meteorological Society 101st Annual Meeting. Virtual. Poster Presentation.
9. Flanagan, P. X., J. B. Basara, E. R. Martin, R. Mahmood, and **J. C. Furtado**, 2021: "Impact of Anthropogenic Climate Change on Future U.S. Great Plains Wet and Dry Years." American Meteorological Society 101st Annual Meeting. Virtual. Oral Presentation.
10. Lee, S. H.*, **J. C. Furtado**, and A. J. Charlton-Perez, 2021: "Wintertime North American Weather Regimes and the Stratospheric Polar Vortex." American Meteorological Society 101st Annual Meeting. Virtual. Oral Presentation.
11. Wakefield, R. A.*, J. B. Basara, J. M. Shepherd, N. Brauer, **J. C. Furtado**, J. Santanello, and R. Edwards, 2021: "Reintensification of Tropical Storm Bill (2015): Contributions of the Brown Ocean Effect." American Meteorological Society 101st Annual Meeting. Virtual. Oral Presentation.

2020

1. Lee, S. H.*, A. J. Charlton-Perez, **J. C. Furtado**, and S. J. Woolnough, 2020: "Representation of the Scandinavia-Greenland Pattern and its Relationship with the Polar Vortex in S2S Forecast Models." American Geophysical Union 2020 Fall Meeting. Virtual. Poster Presentation.

2. **Ćwik, P.***, R. McPherson, and **J. C. Furtado**, 2020: "Relationships between WXMAXSHEAR Parameter and Atmospheric Patterns Associated with Tornado Outbreaks in the USA." American Geophysical Union 2020 Fall Meeting. Virtual. Oral Presentation.
3. **Furtado, J. C.**, 2020: "Winter 2020/21 Seasonal Forecast Discussion." NSF PRES²iP Project. Virtual. Oral Presentation.
4. **Furtado, J. C.**, B. T. Anderson, and M. H. Rogers*, 2020: "Links between the Pacific Decadal Precession and North American Winter Climate Extremes." NOAA's 45th Climate Diagnostics and Prediction Workshop. Virtual. Oral Presentation.
5. Lee, S. H.***,** A. J. Charlton-Perez, **J. C. Furtado**, and S. J. Woolnough, 2020: "Representation of the Scandinavia-Greenland Pattern and its Relationship with the Polar Vortex in S2S Forecast Models." 6th United Kingdom Climate Dynamics Workshop. Virtual. Oral Presentation.
6. **Ćwik, P.***, E. Martin, R. McPherson, H. Lazrus, **J. C. Furtado**, E. Mullens, C. M. Kuster, and M. J. Wagner, 2020: "User's Perspective and Decision-Making Process Based on S2S Extreme Precipitation Forecast Products? What We Learned during the PRES²iP Workshop." American Meteorological Society 100th Annual Meeting. Boston, MA, USA. Oral Presentation.
7. Dickinson, T. A.***,** M. B. Richman, and **J. C. Furtado**, 2020: "Developing a Subseasonal-to-Seasonal Extreme Precipitation Events Database for the Contiguous United States." American Meteorological Society 100th Annual Meeting. Boston, MA, USA. Poster Presentation.
8. Flanagan, P. X., J. B. Basara, E. R. Martin, R. Mahmood, and **J. C. Furtado**, 2020: "Primary Atmospheric Drivers of Dry and Wet Periods over the U.S. Great Plains within CMIP5 Models." American Meteorological Society 100th Annual Meeting, Boston, MA, USA. Poster Presentation.
9. **Furtado, J. C.** and B. A. Jarrett*, 2020: "Characterizing Regimes of Northern Hemisphere Stratospheric Polar Vortex Variability." American Meteorological Society 100th Annual Meeting. Boston, MA, USA. Poster Presentation.
10. Ohnstad, J. D. R.***,** and **J. C. Furtado**, 2020: "Subseasonal Winter Weather Predictability Associated with Single versus Multiple Wave Pulse Events and Their Impacts on the Arctic Stratospheric Polar Vortex." American Meteorological Society 100th Annual Meeting. Boston, MA, USA. Oral Presentation.
11. Rogers, M. H.***,** and **J. C. Furtado**, 2020: "The Pacific Decadal Precession and Its Relationship to Tropical and Extratropical North Pacific Decadal Variability in the CMIP6 Models." American Meteorological Society 100th Annual Meeting. Boston, MA, USA. Poster Presentation.

2019

1. Lee, S. H.***,** A. J. Charlton-Perez, **J. C. Furtado**, and S. J. Woolnough, 2019: "Abrupt stratospheric vortex weakening associated with North Atlantic anticyclonic wave breaking." ECMWF Workshop: Stratospheric predictability and impact on the troposphere. Reading, UK. Poster Presentation.

2. **Furtado, J. C.** and M. R. Green*, 2019: "The Combined Influence of the MJO and the Stratospheric Polar Vortex on Northern Hemisphere Winter Weather Patterns." ECMWF Workshop: Stratospheric predictability and impact on the troposphere. Reading, UK. Poster Presentation.
3. Lee, S. H.*, A. J. Charlton-Perez, **J. C. Furtado**, and S. J. Woolnough, 2019: "Abrupt stratospheric vortex weakening associated with North Atlantic anticyclonic wave breaking." Atmospheric Circulation in a Changing Climate Workshop. Madrid, Spain. Poster Presentation.
4. **Furtado, J. C.** and Y. You*, 2019: "Using South Pacific Climate Variability to Improve ENSO Forecast Skill." 2nd Meridional Mode Workshop. Columbus, OH, USA. Oral Presentation.
5. **Furtado, J. C.**, G. C. Jennrich*, J. B. Basara, and E. R. Martin, 2019: "Characteristics of and Precursors to Extreme Precipitation Events in the United States." NOAA's 44th Climate Diagnostics and Prediction Workshop. Raleigh, NC, USA. Oral Presentation.
6. **Furtado, J. C.** and Y. You*, 2019: "Using South Pacific Climate Variability to Improve Seasonal ENSO Forecast Skill." 2019 Australian Meteorological and Oceanographic Society / International Conference on Tropical Meteorology and Oceanography (AMOS-ICTMO) Meeting. Darwin, NT, Australia. Oral Presentation.
7. Flanagan, P. X., J. B. Basara, **J. C. Furtado**, E. R. Martin, and X. Xiao, 2019: "Role of Pacific Sea Surface Temperatures in the U.S. Great Plains Pluvial Years." American Meteorological Society 99th Annual Meeting, Phoenix, AZ, USA. Oral Presentation.
8. Jennrich, G. C.*, and **J. C. Furtado**, 2019: "Synoptic Precursors to Subseasonal to Seasonal Extreme Precipitation Events Across the United States." American Meteorological Society 99th Annual Meeting, Phoenix, AZ, USA. Oral Presentation.

2018

1. Ćwik, P.*, E. Martin, J. Basara, H. Brooks, C. Homeyer, **J. C. Furtado**, G. C. Jennrich*, H. Lazrus, R. McPherson, E. Mullens, M. Richman, A. Robinson-Cook, and D. Rosendahl, 2018: "PRES²iP: Prediction of Rainfall Extremes at Subseasonal-to-Seasonal Periods - Year #1." American Geophysical Union 2018 Fall Meeting, Washington, DC, USA. Poster Presentation.
2. **Furtado, J. C.**, G. C. Jennrich*, and J. B. Basara, 2018: "Synoptic Precursors to Subseasonal to Seasonal Extreme Precipitation Events Across the United States." American Geophysical Union 2018 Fall Meeting, Washington, DC, USA. Oral Presentation.
3. **Furtado, J. C.**, and Y. You*, 2018: "The South Pacific Meridional Mode and its Role in Tropical Pacific Climate Variability." International Conferences on Subseasonal to Decadal Prediction, Boulder, CO, USA. Poster Presentation.
4. **Furtado, J. C.**, M. R. Green*, E. A. Barnes, M. L'Heureux, L. M. Ciasto, K. Harnos, and A. Allgood, 2018: "The Combined Influence of the MJO and the Stratospheric Polar Vortex on NH Winter Weather Patterns." International Conferences on Subseasonal to Decadal Prediction, Boulder, CO, USA. Poster Presentation.

5. **Furtado, J. C.**, P. Ćwik*, E. Martin, J. Basara, H. Brooks, C. Homeyer, G. C. Jennrich*, H. Lazrus, R. McPherson, E. Mullens, M. Richman, A. Robinson-Cook, and D. Rosendahl, 2018: "PRES²iP: Prediction of Rainfall Extremes at Subseasonal-to-Seasonal Periods - Year #1." International Conferences on Subseasonal to Decadal Prediction, Boulder, CO, USA. Poster Presentation.
6. Anderson, B. T., **J. C. Furtado**, E. Di Lorenzo, and A. Capotondi, 2018: "The Pacific Decadal Precession: Our Current Understanding of its Dynamics, Regional Climate Effects, and Predictability." International Conferences on Subseasonal to Decadal Prediction, Boulder, CO, USA. Oral Presentation.
7. Domeison, D. I., A. H. Butler, A. J. Charlton-Perez, B. Ayarzagüena, M. P. Baldwin, E. Dunn-Sigouin, **J. C. Furtado**, C. I. Garfinkel, P. Hitchcock, A. Y. Karpechko, J. Knight, A. Lang, E.-P. Lim, Y. Lim, A. Marshall, C. Schwartz, I. R. Simpson, S.-W. Son, K. Song, and M. Taguchi, 2018: "The Role of Stratosphere - Troposphere Coupling in Sub-seasonal to Seasonal Prediction using the S2S Database." International Conferences on Subseasonal to Decadal Prediction, Boulder, CO, USA. Oral Presentation.
8. **Furtado, J. C.**, and C. Narotsky*, 2018: "Trends in the Northern Hemisphere Stratospheric Polar Vortex During the 20th and 21st Centuries." AOGS 15th Annual Meeting, Honolulu, HI, USA. Oral Presentation.
9. **Furtado, J. C.**, and Y. You*, 2018: "The South Pacific Meridional Mode and its Role in ENSO Variability." AOGS 15th Annual Meeting, Honolulu, HI, USA. Oral Presentation.
10. **Furtado, J. C.**, and Y. You*, 2018: "The South Pacific Oscillation and Its Potential Role in ENSO Development." AGU / ASLO / TOS 2018 Ocean Sciences Meeting, Portland, OR, USA. Oral Presentation.
11. You, Y.*, and **J. C. Furtado**, 2018: "The South Pacific Meridional Mode and Its Role in the Tropical Pacific Interannual-to-Decadal Variability: Observations and Models." AGU / ASLO / TOS 2018 Ocean Sciences Meeting, Portland, OR, USA. Oral Presentation.
12. Green, M. R.*, **J. C. Furtado**, E. A. Barnes, M. L'Heureux, L. M. Ciasto, and K. Harnos, 2018: "Joint Influences of the MJO and the Stratospheric Polar Vortex on the Northern Hemisphere Extratropical Circulation." American Meteorological Society 98th Annual Meeting. Austin, TX, USA. Oral Presentation.
13. Flanagan, P. X.*, J. Basara, **J. C. Furtado**, and X. Xiao, 2018: "Primary Atmospheric Drivers of Pluvial Years in the United States Great Plains." American Meteorological Society 98th Annual Meeting. Austin, TX, USA. Oral Presentation.
14. Narotsky, C.* and **J. C. Furtado**, 2018: "Quantifying Stratospheric Polar Vortex Trends during the 20th and 21st Centuries." American Meteorological Society 98th Annual Meeting. Austin, TX, USA. Poster Presentation.
15. Balderas, N.*, G. Jennrich*, N. Myers*, and **J. C. Furtado**, 2018: "Recent and Future Trends of Cold Season Extratropical Cyclones over the Eastern United States." American Meteorological Society 98th Annual Meeting, Austin, TX, USA. Poster Presentation.

16. **Furtado, J. C.**, and Y. You*, 2018: "The Role of the South Pacific Oscillation in ENSO Predictions." 98th American Meteorological Society Annual Meeting, Austin, Poster Presentation.
17. You, Y.*, and **J. C. Furtado**, 2018: "The South Pacific Meridional Mode and Its Role in the Tropical Pacific Interannual-to-Decadal Variability: Observations and Models." American Meteorological Society 98th Annual Meeting, Austin, TX, USA. Oral Presentation.

2017

1. Rosendahl, D. H., P. Cwik*, E. R. Martin, J. Basara, H. Brooks, **J. C. Furtado**, C. Homeyer, H. Lazrus, R. McPherson, E. Mullens, M. Richman, and A. Robinson-Cook, 2017: "Developing a Framework for Seamless Prediction of Sub-Seasonal to Seasonal Extreme Precipitation Events in the United States." American Geophysical Union 2017 Fall Meeting. New Orleans, LA, USA. Poster Presentation.
2. Lampert, D., **J. C. Furtado**, K. Karleskint, M. Moursy*, and C. Dyson*, 2017: "Analysis of Future Flood Risks associated with Climate change on Oklahoma City Infrastructure." AWRA Annual Water Resources Conference, Portland, OR, USA. Oral Presentation.
3. Lampert, D., **J. C. Furtado**, K. Karleskint, M. Moursy*, and C. Dyson*, 2017: "Analysis of Future Flood Risks associated with Climate change on Oklahoma City Infrastructure." Oklahoma Governor's Water Conference, Oklahoma City, OK, USA. Oral Presentation.
4. Green, M. R.*, **J. C. Furtado**, E. A. Barnes, M. L'Heureux, L. M. Ciasto, and K. Harnos, 2017: "Evaluating the Joint Influence of the MJO and the Stratospheric Polar Vortex on Northern Hemisphere Winter Weather Patterns." 42nd Annual NOAA Climate Diagnostics and Prediction Workshop, Norman, OK, USA. Oral Presentation.
5. Flanagan, P. X.*, J. Basara, **J. C. Furtado**, and X. Xiao, 2017: "Primary Atmospheric Drivers of United States Great Plains Pluvial Years." 42nd Annual NOAA Climate Diagnostics and Prediction Workshop, Norman, OK, USA. Oral Presentation.
6. **Furtado, J. C.**, J. Cohen, E. Becker, and D. Collins, 2017: "Predictability of Sudden Stratospheric Warmings in Operational Subseasonal-to-Seasonal Forecasting Models." 42nd Annual NOAA Climate Diagnostics and Prediction Workshop, Norman, OK, USA. Oral Presentation.
7. Rosendahl, D. H., P. Cwik*, E. R. Martin, J. B. Basara, H. Brooks, **J. C. Furtado**, C. Homeyer, H. Lazrus, R. McPherson, E. Mullens, M. Richman, and A. Robinson-Cook, 2017: "Developing a Framework for Seamless Prediction of Sub-Seasonal to Seasonal Extreme Precipitation Events in the United States." 42nd Annual NOAA Climate Diagnostics and Prediction Workshop, Norman, OK, USA. Poster Presentation.
8. **Furtado, J. C.**, M. R. Green*, E. A. Barnes, M. L'Heureux, L. M. Ciasto, and K. Harnos, 2017: "Modulation of Wintertime MJO Teleconnections by the Northern Hemisphere Stratospheric Polar Vortex." 18th Cyclone Workshop. Saint-Adele, Quebec, Canada. Oral Presentation.
9. **Furtado, J. C.**, J. Cohen, E. Becker, and D. Collins, 2017: "Predictability of the Tropospheric NAM and SSWs in the NMME Phase-2 Models." NOAA OAR/CPO NMME Webinar Series. Oral Presentation.

10. **Furtado, J. C.**, J. Cohen, E. Becker, and D. Collins, 2017: "Predictability of the Tropospheric NAM and SSWs in the NMME Phase-2 Models." American Meteorological Society 97th Annual Meeting, Seattle, WA, USA. Oral Presentation.
11. Newman, B.*, B. Elmer*, M. Angst*, and **J. C. Furtado**, 2017: "The Association Between El Niño Intensity and North American Winter Weather." American Meteorological Society 97th Annual Meeting, Seattle, WA, USA. Poster Presentation.
12. Barlow, M., J. Cohen, **J. C. Furtado**, and L. Agel, 2017: "Three-Dimensional Structure and Daily Evolution of Vertically-Coherent Troposphere-Stratosphere Wave Activity Pulses." American Meteorological Society 97th Annual Meeting, Seattle, WA, USA. Oral Presentation.

2016

1. Anderson, B. T., **J. C. Furtado**, E. Di Lorenzo, and D. J. S. Gianotti*, 2016: "The Pacific Decadal Precession and Climate Disturbances in the Northwest." 7th Annual Northwest Climate Conference, Skamania, WA, USA. Poster Presentation.
2. **Furtado, J. C.**, E. Di Lorenzo, B. T. Anderson, D. J. S. Gianotti*, N. Schneider, and M. A. Alexander, 2016: "Tropical - North Pacific Climate Interactions on Multiple Timescales." SCENARIO Workshop, Reading, UK. Oral Presentation.
3. Barlow, M., J. Cohen, and **J. C. Furtado**, 2016: "Three-Dimensional Structure and Daily Evolution of Vertically-Coherent Troposphere-Stratosphere Wave Activity Pulses." EGU General Assembly, Vienna, Austria. Oral Presentation.

2015

1. **Furtado, J. C.**, B. T. Anderson, D. J. S. Gianotti*, and E. Di Lorenzo, 2015: "The Pacific Decadal Precession and Its Links to US Climate." South Central Climate Science Center 4th Annual Research Workshop, Fort Worth, TX, USA. Poster Presentation.

2014

1. Cohen, J., **J. C. Furtado**, M. Barlow, D. Whittleston*, and D. Entekhabi, 2014: "Linking Siberian Snow Cover to Precursors of Stratospheric Variability and Intraseasonal Predictability." American Geophysical Union 2014 Fall Meeting. San Francisco, CA, USA. Poster Presentation.
2. Cohen, J., J. A. Screen, **J. C. Furtado**, M. Barlow, D. Whittleston*, D. Coumou, J. Francis, K. Dethloff, D. Entekhabi, and J. Overland, 2014: "The Relationship Between Recent Arctic Amplification and Extreme Mid-Latitude Weather." American Geophysical Union 2014 Fall Meeting. San Francisco, CA, USA. Oral Presentation.

2013

1. **J. C. Furtado**, J. Cohen, J. E. Jones, M. Barlow, D. Whittleston*, and D. Entekhabi, 2013: "Linking Siberian Snow Cover to Precursors of Stratospheric Variability." American Geophysical Union 2013 Fall Meeting. San Francisco, CA, USA. Poster Presentation.

2012

1. Cohen, J., **J. C. Furtado**, M. Barlow, J. E. Cherry, and V. A. Alexeev, 2012: "Has Anthropogenic Global Warming in the Arctic Contributed to Colder Winter Weather in the Northern Hemisphere Mid-Latitudes?" American Geophysical Union 2012 Fall Meeting. San Francisco, CA, USA. Oral Presentation.
2. **Furtado, J. C.**, J. Cohen, A. Butler, E. Riddle, and A. Kumar, 2012: "Eurasian Snow Cover, Stratosphere-Troposphere Coupling, and NH Wintertime Climate Variability in CMIP5." 37th Annual NOAA Climate Diagnostics and Prediction Workshop. Fort Collins, CO, USA. Oral Presentation.
3. **Furtado, J. C.**, and E. Di Lorenzo, 2012: "The Meridional Mode and Tropical Pacific Decadal Variability in the CMIP5 Models." American Geophysical Union 2012 Fall Meeting. San Francisco, CA, USA. Poster Presentation.

2011

1. Cohen, J., **J. C. Furtado**, M. Barlow, V. Alexeev, and J. Cherry, 2011: "Are the Two Recent Harsh Northern Hemisphere Winters Manifestation of Anthropogenic Global Warming in the Arctic?" WCRP Open Science Conference: Climate Research in Service to Society. Denver, CO, USA. Poster Presentation.
2. **Furtado, J. C.**, J. Cohen, A. Butler, E. Riddle, and A. Kumar, 2011: "Eurasian Snow Cover Variability and Wintertime Stratosphere / Troposphere Coupling in the CMIP5 Models." WCRP Open Science Conference: Climate Research in Service to Society. Denver, CO, USA. Poster Presentation.
3. **Furtado, J. C.**, E. Di Lorenzo, B. T. Anderson, and N. Schneider, 2011: "Dynamics of the North Pacific Oscillation and Connections to Tropical Pacific Variability." 36th Annual Northeastern Storm Conference, Taunton, MA, USA. Oral Presentation.

2010

1. **Furtado, J. C.**, E. Di Lorenzo, B. T. Anderson, and N. Schneider, 2010: "Dynamics of the North Pacific Oscillation and Connections to Tropical Pacific Variability." American Geophysical Union 2010 Fall Meeting. San Francisco, CA, USA. Poster Presentation.
2. Di Lorenzo, E., K. M. Cobb, **J. C. Furtado**, N. Schneider, B. T. Anderson, M. Alexander, and D. Vimont, 2010: "ENSO, Pacific Decadal Oscillation and North Pacific Gyre Oscillation: Towards an Integrated View of Pacific Climate." American Geophysical Union 2010 Western Pacific Geophysics Meeting. Taipei, Taiwan. Oral Presentation.
3. Di Lorenzo, E., K. M. Cobb, **J. C. Furtado**, N. Schneider, B. T. Anderson, M. Alexander, and D. Vimont, 2010: "Central Pacific El Niño and North Pacific Decadal Climate Change." 2010 Western Pacific Geophysics Meeting. Taipei, Taiwan. Oral Presentation.
4. Di Lorenzo, E., K. M. Cobb, **J. C. Furtado**, N. Schneider, B. T. Anderson, M. Alexander, and D. Vimont, 2010: "ENSO and the North Pacific Gyre Oscillation: An Integrated View of Pacific Decadal Dynamics." 2010 Ocean Sciences Meeting. Portland, OR, USA. Oral Presentation.

5. **Furtado, J. C.**, and E. Di Lorenzo, 2010: "North Pacific Decadal Variability and Climate Change in the IPCC AR4 Models." American Meteorological Society 90th Annual Meeting. Atlanta, GA, USA. Oral Presentation.

2008

1. Di Lorenzo, E., **J. C. Furtado**, N. Schneider, A. Bracco, 2008: "ENSO and the North Pacific Gyre Oscillation: A Dynamical Framework to Understand Present and Future Climate." American Geophysical Union 2008 Fall Meeting. San Francisco, CA, USA. Oral Presentation.
2. **Furtado, J. C.**, and E. Di Lorenzo, 2008: "Decadal Climate Variability of the North Pacific: Past and Future." Eastern Pacific Ocean Conference 2008. Fallen Leaf Lake, CA, USA. Oral Presentation.

2007

1. **Furtado, J. C.**, E. Di Lorenzo, and K. M. Cobb, 2007: "Reconstructing Tropical Sea Surface Temperatures Using Precipitation Proxy Records: Methods and Uncertainties." IUGG General Assembly 2007. Perugia, Italy. Oral Presentation.
2. Di Lorenzo, E., **J. C. Furtado**, and K. M. Cobb, 2007: "Reconstructing Tropical Sea Surface Temperatures Using Precipitation Proxy Records: Methods and Uncertainties." American Geophysical Union 2007 Joint Assembly Meeting. Acapulco, Guerrero, Mexico. Poster Presentation.

2005

1. **Furtado, J. C.**, D. W. J. Thompson, and T. G. Shepherd, 2005: "On the Balanced Response of the Troposphere to the Stratosphere." 30th Annual Northeastern Storm Conference. Burlington, VT, USA. Oral Presentation.

OTHER WORKSHOPS AND CONFERENCES

2018

- American Meteorological Society Early Career Leadership Academy. Washington, DC, USA. **Selected for Participation.**

2016

- National Science Foundation Effectively Communicating Science Workshop – Expert Witness Training Program. St. Paul, MN, USA. **Selected for Participation.**

2006

- National Center for Atmospheric Science Advanced Study Program. "The Art of Climate Modeling." Boulder, CO, USA Washington, DC, USA. **Selected for Participation.**

FUNDED RESEARCH GRANTS

UNDER REVIEW

- **Co-PI** - Subseasonal Fire Ignition Forecasting for the United States Via Multi-scale Location-Based Data Collection, Analysis, and Modeling. NOAA. \$271,458.

CURRENT

1. **Co-PI** - Towards Improving the Prediction of Blocking Patterns and Extreme Weather on Subseasonal-to-Seasonal Timescales. Data Institute for Societal Challenges Big Ideas Challenge Seed Grant Award. 07/01/2021 - 03/31/22. \$10,000.
2. **Co-PI** - RII Track-1: Socially Sustainable Solutions for Water, Carbon, and Infrastructure Resilience in Oklahoma. NSF. Award #OIA-1946093. 07/01/2020 - 06/30/25. \$2,353,654.
3. **Co-PI** - PREEVENTS Track 2: Collaborative Research: Developing a Framework for Seamless Prediction of Sub-Seasonal to Seasonal Extreme Precipitation Events in the United States. NSF. Award #ICER 1663840. 07/01/17 – 06/30/22. \$1,842,562.

PAST

1. **PI** - Collaborative Research: Structure and Influence of Coherent Vertical Pulses of Wave Activity Flux in Observations and Models, from Daily to Seasonal Timescales. NSF. 08/15/17– 07/31/21. \$231,521.
2. **PI** - Investigating the Underlying Mechanisms and Predictability of the MJO - NAM Linkage in the NMME Phase-2 Models. NOAA. 07/01/16 – 06/30/19, \$185,543.
3. **PI** - Analysis of Transportation Infrastructure Risks to Climate Change. Southern Plains Transportation Center. 07/01/16 – 06/30/17. \$12,600.
4. **PI** - Evaluating Sudden Stratospheric Warmings and NAM Predictability in the NMME Phase-2 System. NOAA. 08/01/15 – 07/31/16. \$59,118.
5. **Co-I** - Implementation and Validation of Solar Variability in Radiation Code RRTMG_SW. NASA. 08/01/13 – 07/31/16. \$215,926.
6. **Co-PI** - Identifying Mechanisms of AMOC Variability in ECCO State Estimates and CMIP5 Models. NOAA. 08/01/13 – 07/31/16. \$310,659.

AWARDS AND HONORS

- | | |
|------|--|
| 2021 | Annual Award for Excellence in Research Grants, University of Oklahoma |
| 2019 | AGU Editor's Citation for Excellence for Refereeing, <i>Geophysical Research Letters</i> |

- 2018 **Top Faculty/Staff Forecaster**, Flagstaff, AZ, WxChallenge
Top Faculty/Staff Forecaster, Portland, OR, WxChallenge
- 2017 **Dean's Excellence in Teaching Award**, College of Atmospheric and Geographic Sciences,
University of Oklahoma
Top Faculty/Staff Forecaster, Jackson, MS, WxChallenge
- 2015 **AGU Editor's Citation for Excellence for Refereeing**, *Geophysical Research Letters*
- 2014 **Employee of the Year**, Atmospheric and Environmental Research
Team of the Year, Verisk Climate
- 2010 **Georgia Tech Earth & Atmospheric Sciences Chair Service Award**
- 2008 **Top Graduate Student Forecaster**, Tucson, AZ, WxChallenge
- 2006 **Top National Forecaster**, Salt Lake City, UT, NCWFC
Top Graduate Student Forecaster, Pensacola, FL, NCWFC
- 2005–2009 **Georgia Tech Presidential Fellowship**
- 2006 **Top Graduate Student Forecaster**, Hoquiam, WA, NCWFC
- 2002–2005 **AMS/NASA Earth Science Enterprise Fellowship**
Colorado State University 3F Fellowship
- 2001 **AMS Howard T. Orville Scholarship in Meteorology**
- 1998–2002 **Lyndon State College Presidential Scholar**
Martin Luther King Jr. Foundation Scholar
Portuguese-American Scholar

TEACHING EXPERIENCE

- 2015– **University of Oklahoma**
Courses Taught
METR 1014 – Introduction to Weather and Climate
METR 3980 – Honors Research
METR 4233/4803 – Physical Meteorology III: Radiation and Climate
METR 5433 – Advanced Statistical Meteorology
METR 6970 – Weather and Climate Seminar
- Guest Lectures*
METR 3523 – Managing for a Changing Climate (Online Course)

METR 4443/5443 – Introduction to Tropical Meteorology (Spring 2019)
METR 4922 – Senior Capstone II (Spring 2015, Spring 2016, Spring 2018)
METR 4543/5543 – Global Climate Change (Spring 2017)
METR 4491/5491 – Weather Briefing (Spring 2016, Spring 2017)
METR 4233 – Physical Meteorology III: Radiation and Climate (Fall 2015)

2014–2015

Boston University

Courses Taught

GE310 – Climate and the Environment

GE507 – Dynamical Oceanography

April 2012

University of Massachusetts Lowell

Guest Lecture

ATMO 5080 – The Climate System

2007–2010

Georgia Institute of Technology

Graduate Teaching Assistant

EAS 1600HP – Introduction to Environmental Science (Honors)

EAS 8803 – Advanced Environmental Data Analysis

Guest Lecture

EAS 3113 – Energy, Environment, and the Energy Cycle (Fall 2008)

2006 – 2012

Private Academic Tutor

2005 – 2006

Georgia Institute of Technology Athletic Association

Student-Athlete Tutor

2004

Colorado State University

Graduate Teaching Assistant

AT605 – General Circulation of the Atmosphere

1999 – 2002

Lyndon State College

Math Lab Tutor

GRADUATE STUDENTS ADVISED

CURRENT

2020 –

Oliver Millin (Ph.D.)

2018 –

Ty Dickinson (Ph.D.) (Co-Advised w/ M. Richman at U. Oklahoma)

PAST.....

- 2018 – 2021** Simon Lee (Ph.D.) (Co-Advised w/ A. Charlton-Perez & S. Woolnough at University of Reading)
Dissertation: Stratosphere-Troposphere Coupling on Subseasonal Timescales
- 2018 – 2020** Jacob Ohnstad (M.S.)
Thesis: Subseasonal Winter Weather Predictability Associated with Single vs. Multiple Wave Pulse Events and Their Impact on the Arctic Stratospheric Polar Vortex
- 2018 – 2020** Matthew Rogers (M.S.)
Thesis: The Pacific Decadal Precession and its Relationship to Tropical Pacific Decadal Variability in CMIP6 Models
- 2017 – 2019** Gregory Jennrich (M.S.)
Thesis: Synoptic Characteristics and Precursors to Subseasonal to Seasonal Extreme Precipitation Events Across the United States
- 2016 – 2018** Matthew Green (M.S.)
Thesis: Evaluation of the Madden-Julian Oscillation and the Stratospheric Polar Vortex and Their Joint Influence on the Northern Hemisphere Extratropical Circulation
- 2016 – 2018** Yujia You (M.S.)
Thesis: South Pacific Atmospheric Internal Variability and Its Role in the El Niño -Southern Oscillation

MASTERS AND DOCTORAL COMMITTEE MEMBERSHIP

CURRENT.....

M.S.: Joseph Burzduk (2021 –) • Alyssa Woodward (2021 –) • Stephen Foskey (2021 –) • Steven Jester (2021 –)

Ph.D.: Benjamin Davis (2021 –) • Melanie Schroers (2021 –) • Sean Ernst (2021 –) • Paulina Ćwik (2021 –) • Stuart Edris (2021 –) • Madeline Clark (2020 –) • David Harrison (2019 –)

PAST.....

M.S.: Hrag Najarian (2021 – 2021) • Sadiksha Rai (2021 – 2021) • Taylor Grace (2020 – 2021) • Bryony Puxley (2020 – 2021) • Melanie Schroers (2020 – 2020) • Andy Wilkins (2020 – 2020) • Andrew Berrington (2019 – 2020) • Jordan Laser (2019 – 2020) • Ian Gesell (2019 – 2020) • Amanda Burke (2019 – 2019) • Madeline Clark (2018– 2019) • Qingyu Wang (2018 – 2018) • Ryann Wakefield (2017 – 2018) • Allison Brannon (2016 – 2017) • Erik Loken (2016 – 2017) • James Danco (2015 – 2016)

Ph.D.: Samuel Lillo (2017 – 2021) • Ryann Wakefield (2019 – 2021) • Jordan Christian (2017 – 2020) • Makenzie Krocak (2017 – 2020) • Ryan Lagerquist (2017 – 2020) • Paul Flanagan (2016 – 2018)

UNDERGRADUATE STUDENTS MENTORED

PAST

Daniel Groeneveld (2021) • Jacob Genuise (2020 – 2021) • Kelsey Westerman (2020 – 2021) • Bailey Jarrett (2018 – 2020) • Sydney Butler (2019 – 2020) • Madisyn Ferris (2019 – 2020) • Walter Wilson (2019 – 2020) • Katherine Davis (2018 – 2020) • Maci Gibson (2018 – 2020) • Andria Myers (2018 – 2019) • Levi Schmitmeyer (2018 – 2019) • Benjamin Savill (2018 – 2019) • Carly Narotsky (Summer 2017) • Clarice Dyson (2016 – 2017) • Gregory Jennrich (2016 – 2017) • Nicholas Balderas (2016 – 2017) • Noah Myers (2016 – 2017) • Erin Burns (2016 – 2017) • Sarah Rodriguez (2016 – 2017) • Max Angst (2015 – 2016) • Brittany Newman (2015 – 2016) • Blake Elmer (2015 – 2016)

SERVICE AND LEADERSHIP

- 2022 –** **Member,** US Climate Variability and Predictability (CLIVAR) Predictability, Predictions, and Applications Interface (PPAI) Panel
- 2021 –** **Member,** OU School of Meteorology Graduate Studies Committee
Member, OU College of Arts and Sciences Environmental Studies Program Steering Committee
Member, OU Department of Geopgraphy and Environmental Sustainability Community Resilience Faculty Search Committee
Mentor, School of Meteorology Mentoring Program
- 2020 –** **Participant,** Letters to a Pre-Scientist Program
- 2017 –** **Participant,** Skype-A-Scientist Program
- 2015 –** **Local Manager,** OU WxChallenge Team
- 2014 –** **Proposal Reviewer,** National Science Foundation
- 2003 –** **Peer Reviewer,** *J. Climate, J. Geophys. Res., Nature Communications, Nature Climate Change, Deep Sea Res., Climate Dyn., Q. J. Roy. Meteor. Soc., Atmos. Sci. Lett., Intl. J. Climatology, Geophys. Res. Lett., J. Meteor. Soc. Japan*
- 2020 – 2021** **Proposal Panel Reviewer,** NASA
- 2019 – 2021** **Member,** OU School of Meteorology Strategic Planning Committee
- 2018 – 2020** **Mentor,** AGU Mentor Program

2016 – 2020 **Member**, NOAA MAPP Subseasonal-to-Seasonal (S2S) Task Force

2016 – 2020 **Faculty Panelist**, OU School of Meteorology High School Visitation Days

2015 – 2020 **Member**, NOAA NMME Task Force

2018 – 2019 **Invited Speaker and Contributor**, Citizen’s Climate Lobby, Oklahoma City Chapter

2015 – 2019 **Member**, Graduate Admissions Committee, OU School of Meteorology

2014 – 2019 **Member**, AMS Weather Analysis and Forecasting Committee

2017 – 2018 **Member**, Inaugural Class of AMS Early Career Leadership Academy
Member, Search Committee, Director, OU School of Meteorology

2016 – 2018 **Member**, OU School of Meteorology Undergraduate Curriculum Committee

2015 – 2018 **Member**, weather.ou.edu Development Committee

October 2017 **Host and Co-Organizer**, 42nd Annual NOAA Climate Diagnostics and Prediction Workshop

May – July 2017 **Mentor**, OU REU Program

August 2016 **Participant**, NSF Effectively Communicating Science Workshop – Expert Witness Training Program

2015 – 2017 **Chairman**, OU School of Meteorology Reanalysis Data Bank Committee

2013 – 2015 **Debate Judge**, Boston Debate League

September 2014 **Panelist**, Belmont High School Career Night

December 2013 **Co-Convener**, Natural and Societal Impacts of Decadal Climate Variability, AGU 2013 Fall Meeting

November 2013 **Speaker**, First Lego League Competition

2011 **Contributing Member**, PICES Working Group 20

2009 – 2010 **Secretary**, Metro Atlanta Chapter of the AMS
Member, Prospective Graduate Student Committee, Georgia Tech School of Earth & Atmospheric Sciences
Member, Social Committee, Georgia Tech School of Earth & Atmospheric Sciences
Member, Undergraduate Curriculum Committee, Georgia Tech School of Earth & Atmospheric Sciences

2008 – 2010	Speaker , Public outreach program for elementary students about science/weather
2006 – 2010	Local Manager , Georgia Tech NCWFC / WxChallenge Forecast Team
2003 – 2005	Radio DJ , KCSU 90.5 FM
2002 – 2005	Local Manager , Colorado State University NCWFC Forecast Team
2002	Radio DJ , WWLR 91.5 FM
2001 – 2002	President , Lyndon State College Chapter of the AMS/NWA Vice President , Sigma Zeta Honorary Society
1999 – 2000	Treasurer , Lyndon State College Chapter of the AMS/NWA

MEDIA INTERVIEWS

2021

1. **[15 Dec 2021]** "Oklahoma City sees warmest, driest December on record" – *KOCO 5 News, Oklahoma City*
2. **[13 Dec 2021]** "Tornades meurtrières aux Etats-Unis : la crise climatique est-elle coupable?" – *Ouest-France*
3. **[12 Dec 2021]** "EXPLAINER: Was tornado outbreak related to climate change?" – *Associated Press*
4. **[8 Dec 2021]** "Texas energy regulators, gas industry try to reassure the public that the state's power grid is ready for winter." – *Texas Tribune*
5. **[21 Sep 2021]** "Climate Change Expected To Continue Stressing Oklahoma's Electric Grid To The Brink." – *KGOU*
6. **[16 Aug 2021]** "Texas regulators want to prepare the state's electricity grid for extreme weather. But that's a moving target in a warming world." – *Texas Tribune*
7. **[6 Mar 2021]** "La Niña could supercharge this year's tornado season, just like it did to deadly effect in 2011" – *CNN*
8. **[15 Feb 2021]** "14 states face rolling blackouts; millions in Texas without power" – *Associated Press*
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PROFESSIONAL MEMBERSHIPS

- American Geophysical Union
- American Meteorological Society
- National Weather Association
- Sigma Xi Scientific Research Honor Society