

# Jason C. Furtado

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## EDUCATION

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

## PROFESSIONAL APPOINTMENTS

- 2015 –** **University of Oklahoma**  
*Assistant Professor*, School of Meteorology  
*Affiliate Faculty*, South Central Climate Adaptation and Science Center  
*Affiliate Faculty*, School of Psychology
- 2014 – 2015** **Boston University**  
*Lecturer*, Department of Earth and Environment
- 2008 – 2010** **Georgia Institute of Technology Athletics**  
*Forecaster*, NCAA Football and Baseball Games

## REFEREED PUBLICATIONS

\* - Student Author

### IN PREPARATION

- **Furtado, J. C.**, J. Cohen, E. Becker, and D. Collins, 2019: Evaluation of the Predictability of the Northern Annular Mode and Sudden Stratospheric Warmings in the NMME Phase-2 Models. *Climate Dyn.*, in prep.
- Lee, S. H.\*, **J. C. Furtado**, A. J. Charlton-Perez, and S. J. Woolnough, 2019: Wintertime North American weather regimes and the Arctic stratospheric polar vortex. *Geophys. Res. Lett.*, in prep.
- Pegion, K., C. M. Selman, S. Larson, **J. C. Furtado**, and E. J. Becker, 2019: The impact of the extra-tropics on ENSO diversity and predictability. *Climate Dyn.*, in prep.

### UNDER REVIEW

- 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.*, accepted pending revisions.
- 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, 2019: The role of stratosphere - troposphere coupling in sub-seasonal to seasonal prediction using the S2S database. Part I: Predictability in the stratosphere. *J. Geophys. Res.*, accepted pending revisions.
- 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, 2019: The role of stratosphere - troposphere coupling in sub-seasonal to seasonal prediction using the S2S database. Part II: Predictability arising from stratosphere - troposphere coupling. *J. Geophys. Res.*, accepted pending revisions.
- Flanagan, P. X.\*, J. B. Basara, **J. C. Furtado**, E. R. Martin, and X. Xiao, 2019: Role of Pacific sea surface temperatures in United States Great Plains years. *J. Climate*, accepted pending revisions.
- Green, M. R.\*, and **J. C. Furtado**, 2019: Evaluating the joint influence of the Madden-Julian Oscillation and the stratospheric polar vortex on weather pattern across the Northern Hemisphere. *J. Geophys. Res.*, accepted pending revisions.
- Jennrich, G. C.\*, **J. C. Furtado**, J. Basara, and E. R. Martin, 2019: Synoptic characteristics and precursors to subseasonal to seasonal extreme precipitation events across the United States. *J. Climate*, under review.
- 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.*, accepted pending revisions.

## PUBLISHED

### 2019

26. 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.*, in press.
25. 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*, in press.
24. Wakefield, R. A., J. B. Basara, **J. C. Furtado**, B. G. Illston, C. R. Ferguson, and P. Klein, 2019: Spatial-temporal dynamics of land-atmosphere coupling over the Oklahoma Mesonet: Interannual Analysis. *J. Meteor. Appl. Climatol.*, in press.

### 2018

23. 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>.
22. 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.
21. 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

20. 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.
19. Anderson. B. T., **J. C. Furtado**, D. J. S. Gianotti, and E. Di Lorenzo, 2017: Tracking the Pacific Decadal Precession. *J. Geophys. Res.*, **122**, 3214–3227, doi:10.1002/2016JD02596.

### 2016

18. 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.
17. **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.
16. 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

15. 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.

14. **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.

## 2014

13. 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.
12. 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.

## 2013

11. 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>.
10. 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**, <http://dx.doi.org/10.5670/oceanog.2013.70>.
9. 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.
8. 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.

## 2012

7. **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.
6. 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.
5. 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

4. **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.

## 2010

3. 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.

## 2009

2. **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 non-stationarity. *J. Climate*, **22**, 1104–1123

## 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.

## NON-REFEREED PUBLICATIONS

### 2019

4. **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/b0e5a374-5321-4058-a31d-4b2130ac765e>.

### 2018

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

### 2015

2. 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.

## PRESENTATIONS

\* - Student Author.

First author is presenter.

### 2019

55. **J. C. Furtado** 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.
54. Flanagan, P. X.\*, J. 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.

53. Jennrich, G.\*, 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

52. Cwik, P\*, E. Martin, J. Basara, H. Brooks, C. Homeyer, **J. C. Furtado**, G. 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.
51. **Furtado, J. C.**, G. 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.
50. **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.
49. **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.
48. **Furtado, J. C.**, P. Cwik\*, E. Martin, J. Basara, H. Brooks, C. Homeyer, G. 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.
47. 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.
46. 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.
45. **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.
44. **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.
43. **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.

42. 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.
41. 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.
40. 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.
39. 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.
38. 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.
37. **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.
36. 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

35. 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.
34. 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.
33. 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.
32. 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.
31. 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.

30. **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.
29. 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." 42nd Annual NOAA Climate Diagnostics and Prediction Workshop, Norman, OK, USA. Poster Presentation.
28. **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.
27. **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.
26. **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.
25. 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.
24. 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

23. Anderson, B. T., **J. C. Furtado**, E. DiLorenzo, 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.
22. **Furtado, J. C.**, E. DiLorenzo, 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.
21. 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

20. **Furtado, J. C.**, B. T. Anderson, D. J. S. Gianotti\*, and E. DiLorenzo, 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

19. 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.

18. 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

17. **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

16. 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.
15. **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.
14. **Furtado, J. C.**, and E. DiLorenzo, 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

13. 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.
12. **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.
11. **Furtado, J. C.**, E. DiLorenzo, 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

10. **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.
9. 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.
8. 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.

7. 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.
6. **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

5. 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.
4. **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

3. **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.

## INVITED TALKS

### 2019

9. [**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.
8. [**11 April 2019**] "Links Between Autumn Snow Cover and Sea Ice Extent and Northern Hemisphere Wintertime Climate Variability." U.S. CLIVAR. Webinar.

### 2018

7. [**12 July 2018**] "Polar Vortex Variability in the NMME Phase-2 Models." NOAA CPC / NMME Task Force. Webinar.
6. [**17 May 2018**] "The Role of the South Pacific in Tropical Pacific Climate Variability." NOAA Climate Prediction Center, College Park, MD, USA.

### 2017

5. [**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

4. [11 Nov 2016] “Tropical - North Pacific Climate Interactions on Multiple Timescales.” University of Virginia, Department of Environmental Sciences, Charlottesville, VA, USA
3. [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

2. [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, VT, USA.

## 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

### CURRENT

1. **PI** - Investigating the Underlying Mechanisms and Predictability of the MJO - NAM Linkage in the NMME Phase-2 Models. NOAA. Award #NA160AR4310075 07/01/16 – 06/30/19, \$185,543.
2. **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.
3. **Co-PI** - Collaborative Research: Structure and Influence of Coherent Vertical Pulses of Wave Activity Flux in Observations and Models, from Daily to Seasonal Timescales. NSF. Award #AGS-1657905. 08/15/17– 8/14/20. \$231,521.

## PAST

4. **PI** - Analysis of Oklahoma Transportation Infrastructure Investments for Climate Change Adaptation. Southern Plains Transportation Center. 07/01/16 – 06/30/17 \$12,600.
3. **PI** - Evaluating Sudden Stratospheric Warmings and NAM Predictability in the NMME Phase-2 System. NOAA. 08/01/15 – 07/31/16. \$59,118.
2. **Co-I** - Implementation and Validation of Solar Variability in Radiation Code RRTMG\_SW. NASA. 08/01/13 – 07/31/16, \$215,926.
1. **Co-I** - Identifying Mechanisms of AMOC Variability in ECCO State Estimates and CMIP5 Models. NOAA. 08/01/13 – 07/31/16, \$310,659.

## AWARDS AND HONORS

<b>2019</b>	<b>AGU Editor's Citation for Excellence for Refereeing</b> , <i>Geophysical Research Letters</i>
<b>2018</b>	<b>Top Faculty/Staff Forecaster</b> , Flagstaff, AZ, WxChallenge <b>Top Faculty/Staff Forecaster</b> , Portland, OR, WxChallenge
<b>2017</b>	<b>Dean's Excellence in Teaching Award</b> , College of Atmospheric and Geographic Sciences, University of Oklahoma <b>Top Faculty/Staff Forecaster</b> , Jackson, MS, WxChallenge
<b>2015</b>	<b>AGU Editor's Citation for Excellence for Refereeing</b> , <i>Geophysical Research Letters</i>
<b>2014</b>	<b>Employee of the Year</b> , Atmospheric and Environmental Research <b>Team of the Year</b> , Verisk Climate
<b>2010</b>	<b>Georgia Tech Earth &amp; Atmospheric Sciences Chair Service Award</b>
<b>2008</b>	<b>Top Graduate Student Forecaster</b> , Tucson, AZ, WxChallenge
<b>2006</b>	<b>Top National Forecaster</b> , Salt Lake City, UT, NCWFC <b>Top Graduate Student Forecaster</b> , Pensacola, FL, NCWFC
<b>2005–2009</b>	<b>Georgia Tech Presidential Fellowship</b>
<b>2006</b>	<b>Top Graduate Student Forecaster</b> , Hoquiam, WA, NCWFC
<b>2002–2005</b>	<b>AMS/NASA Earth Science Enterprise Fellowship</b> <b>Colorado State University 3F Fellowship</b>
<b>2001</b>	<b>AMS Howard T. Orville Scholarship in Meteorology</b>
<b>1998–2002</b>	<b>Lyndon State College Presidential Scholar</b> <b>Martin Luther King Jr. Foundation Scholar</b> <b>Portuguese-American Scholar</b>

## TEACHING EXPERIENCE

- 2015–**                    **University of Oklahoma**  
*Courses Taught*  
METR 1014 – Introduction to Weather and Climate  
METR 4322 – Physical Meteorology III: Radiation and Climate  
METR 5433 – Advanced Statistical Meteorology
- 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 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)  
METR 4922 – Senior Capstone II (Spring 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

- 2018 – Jacob Ohnstad (M.S.)
- 2018 – Matthew Rogers (M.S.)
- 2017 – Gregory Jennrich (M.S.)
- 2018 – Ty Dickinson (Ph.D.) (Co-Advised w/ M. Richman at University of Oklahoma)
- 2018 – Simon Lee (Ph.D.) (Co-Advised w/ A. Charlton-Perez at University of Reading)

### PAST

- 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.:** Amanda Burke (2019 –)
- Ph.D.:** David Harrison (2019 –) • Ryann Wakefield (2019 –) • Jordan Christian (2017 –) • Makenzie Krocak (2017 –) • Ryan Lagerquist (2017 –) • Samuel Lillo (2017 –)

### PAST

- M.S.:** 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.:** Paul Flanagan (2016 – 2018)

## UNDERGRADUATE STUDENTS MENTORED

### CURRENT

- Bailey Jarrett (2018 –) • Katherine Davis (2018 –) • Maci Gibson (2018 –)

## PAST

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 (2016 – 2017) • Blake Elmer (2016 – 2017)

## SERVICE AND LEADERSHIP

- 2018 –**                    **Mentor**, AGU Mentor Program
- 2017 –**                    **Volunteer**, Skype-A-Scientist Program
- 2016 –**                    **Member**, NOAA MAPP Subseasonal-to-Seasonal (S2S) Task Force  
**Faculty Panelist**, OU School of Meteorology High School Visitation Days  
**Member**, OU School of Meteorology Undergraduate Curriculum Committee
- 2015 –**                    **Member**, NOAA NMME Task Force  
**Local Manager**, OU WxChallenge Team  
**Member**, OU School of Meteorology Undergraduate Curriculum Committee  
**Member**, Graduate Admissions Committee, OU School of Meteorology
- 2014 –**                    **Member**, NOAA NMME Task Force  
**Proposal Reviewer**, National Science Foundation  
**Member**, AMS Weather Analysis and Forecasting Committee
- 2003 –**                    **Member**, NOAA NMME Task Force  
**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*
- 2015 – 2018**            **Member**, weather.ou.edu Development Committee
- 2017 – 2018**            **Member**, Inaugural Class of AMS Early Career Leadership Academy
- 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**        **Proposal Review Panelist**, NSF Graduate Research Fellowship Program  
**Debate Judge**, Boston Debate League
- September 2014**   **Panelist**, Belmont High School Career Night

- December 2013** **Co-Convenor**, 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 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

### 2019

41. [12 Mar 2019] “The Central U.S. is About to Get Hit with a Bomb Cyclone” – *Earther.com*
40. [3 Mar 2019] “Winter storm blasts much of the U.S. and delays spring” – Washington Post
39. [29 January 2019] “Here are the facts: Despite winter storms, global warming is real” – *USA Today*
38. [20 Jan 2019] “Dear Mr. President, that’s not how global warming works” – *Capital Weather Gang / The Washington Post*
37. [18 Jan 2019] “February Deep Freeze On Track: A Late-Winter Outlook That Just Might Pan Out” – *Weather Underground*
36. [16 Jan 2019] “The Polar Vortex Has Fallen Apart, Which is Likely to Unleash a Much Colder End to January” – *The Weather Channel*

### 2018

35. [17 Dec 2018] “Polar vortex could unleash winter wallop by January” – *The Weather Channel*
34. [30 Nov 2018] “AP FACT CHECK: 11 Trump climate goofs and 1 correct claim”- *Associated Press*
33. [24 Oct 2018] “Report: Efforts to suck carbon from air must be ramped up” – *Associated Press*
32. [23 Apr 2018] “Climate change could leave Californians with “weather whiplash” – *CNN*
31. [12 Mar 2018] “Third nor’easter in 2 weeks to slam New England: What’s going on here?” – *Mashable*
30. [5 Jan 2018] “‘Bomb cyclone’ is the new ‘polar vortex.’ Here’s where this year’s weather word comes from” – *Associated Press*
29. [4 Jan 2018] “The ‘Bomb Cyclone” – *Discovery Canada*. (TV Interview)
28. [3 Jan 2018] “Science Says: Why there’s a big chill in a warmer world” – *Associated Press*
27. [2 Jan 2018] “It’s Somehow Going to Get Even Colder in the Eastern US” – *Associated Press*

## 2017

26. [26 Dec 2017] “Unforgiving cold snap will engulf eastern two-thirds of the nation through New Year’s Day” – *Capital Weather Gang / The Washington Post*
25. [27 Oct 2017] “Science Says: Jack Frost nipping at your nose ever later” – *Associated Press*
24. [5 Oct 2017] “OU Gets \$1.5 Million to Study Rain” – *The Journal Record*
23. [17 Aug 2017] “July ranks 2nd for heat globally, hottest recorded on land” – *Associated Press*
22. [3 May 2017] “Climate change expected to make turbulence stronger and more frequent” – *CNN*
21. [17 March 2017] “The numbers are in on this freakishly warm February” – *CBS News*
20. [1 February 2017] “Beyond the extreme: Scientists marvel at ‘increasingly non-natural” Arctic warmth” – *Capital Weather Gang / The Washington Post*
19. [18 January 2017] “Scientists react to Earth’s warmest year: ‘We are heading into a new unknown’” – *Capital Weather Gang / The Washington Post*
18. [18 January 2017] “Earth Sets Hottest Year Record for Third-Straight Time” – *Associated Press*

## 2016

17. [15 December 2016] “Polar Vortex: The Chilly Science of an Arctic Blast” – *LiveScience*
16. [13 December 2016] “The Polar Vortex is Back - Ugh” – *NBC Connecticut*
15. [30 November 2016] “Arctic Air Poised to Invade the U.S. After Record Warm November” – *Mashable*
14. [18 October 2016] “Earth’s 16-Month Record Heat Streak Ends but Warming Remains” – *ABC News / Associated Press*
13. [17 August 2016] “July was ‘absolutely’ Earth’s hottest month ever recorded” – *Capital Weather Gang / The Washington Post*

12. [2 August 2016] “Scientists’ annual physical of planet: Earth’s fever rises” – *Associated Press*
11. [[16 May 2016] “Earth’s relentless streak of record-warm months expands to seven” – *Capital Weather Gang / The Washington Post*
10. [9 May 2016] “Panasonic (Yes, Panasonic) May Have Created the World’s Best Weather Model?” – *Slate.com*
9. [19 April 2016] “Earth’s hot streak continues for a record 11 months” – *CBS News / Associated Press*
8. [11 March 2016] “Panel: Finding Climate Fingerprints in Wild Weather Is Valid” – *Associated Press*
7. [18 February 2016] “El Niño Weakens a Tad, but We Won’t Feel That for Months” – *US News / Associated Press*
6. [5 February 2016] “How melting Arctic ice may have set off era of vicious East Coast snow storms” – *Capital Weather Gang / The Washington Post*
5. [7 January 2016] “All the winter’s a weird weather stage; Here are the players” – *Yahoo News / Associated Press*
4. [4 January 2016] “Arctic outbreak barreling toward U.S. may be Storm Frank’s revenge” – *Mashable*

## 2015

3. [16 November 2015] “By one measure, this wicked El Niño is the strongest ever recorded: What it means” – *Capital Weather Gang / The Washington Post*
2. [23 October 2015] Hurricane Patricia Coverage – *OU Nightly*
1. [20 August 2015] “Heating Up: El Niño Could Increase Business for Climate Forecasters” – *The Journal Record*

## PROFESSIONAL MEMBERSHIPS

- American Geophysical Union
- American Meteorological Society
- National Weather Association