

## Ethan D. Coffel

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ACADEMIC APPOINTMENTS **Dartmouth College**, Hanover, NH **Fall 2018 -**  
Neukom Institute Postdoctoral Fellow  
Departments of Geography and Earth Science

EDUCATION **Columbia University**, New York, NY **2013 - 2018**  
Ph.D Atmospheric Science  
National Science Foundation Graduate Research Fellowship recipient  
Advisers: Dr. Radley Horton, Dr. Arlene Fiore, Dr. Richard Seager

**Columbia University**, New York, NY  
M.A. Atmospheric Science, May 2015

**Northwestern University**, Evanston, IL **2009 - 2013**  
B.A. with honors, Computer Science, Integrated Science

PUBLICATIONS: IN PROGRESS 8. **Coffel, E. D.**, Keith, B., Lesk, C., Bower, E., Lee, J., Horton, R. M., *More frequent concurrently hot and dry years in the Nile basin despite increasing precipitation.* In review.

7. **Coffel, E. D.**, Mankin, J. S., Winter, J. M., Horton, R. M., *Seasonal warming amplification and land-air coupling.* In Preparation.

PUBLISHED PEER-REVIEWED ARTICLES 6. **Coffel, E. D.**, Horton, R. M., de Sherbinin, A., 2017: *Temperature and humidity based projections of a rapid rise in global heat stress exposure during the 21st century.* Environmental Research Letters.

5. **Coffel, E. D.**, Thompson, T. R., Horton, R. M., 2017: *The impact of rising temperatures on aircraft takeoff performance.* Climatic Change Letters.

4. Lesk, C., **Coffel, E. D.**, D'Amato, T., Dodds, K., Horton, R. M., 2017: *Significant threat to North American forests from Southern Pine Beetle with warming winters.* Nature Climate Change.

3. Horton, R. M., Mankin, J. S., Lesk, C., **Coffel, E. D.**, Raymond, C., 2016: *A Review of Recent Advances in Research on Extreme Heat Events.* Current Climate Change Reports.

2. Horton, R. M., **Coffel, E. D.**, Winter, J. M., Bader, D. A., 2015: *Projected changes in extreme temperature events based on the NARCCAP model suite.* Geophysical Research Letters.

1. **Coffel, E. D.**, Horton, R. M., 2015: *Climate change and the impact of extreme temperatures on aviation.* AMS Weather, Climate, and Society.

PUBLISHED BOOK CHAPTERS 1. **Coffel, E. D.**, Sherbinin, A. de, Horton, R. M., Lane, K., Kienberger, S., Wilhelmi, O., 2018: "The Science of Adaptation to Extreme Heat". *Resilience: The Science of Adaptation to Climate Change.* Eds. Frank, T., Zommers, Z. Elsevier.

HONORS & FUNDING Dartmouth College Neukom Institute Postdoctoral Fellowship, 2018 – 2020.  
NASA NPP Postdoctoral Fellowship (*declined*).  
National Science Foundation Graduate Research Fellowship, 2015 – 2018, \$138,000.

NSF Funding for the AMS Summer Policy Colloquium, 2016, \$5,000.  
Lamont Climate Center Grant, 2015, \$3,140.  
Columbia Graduate Student Travel Grant, 2015, \$250.  
Northeast Climate Science Center Fellow, 2013 – 2018.  
NOAA Hollings Scholarship, 2011 – 2013, \$24,000.  
NASA Reduced Gravity Student Flight Opportunities Program, 2010 – 2011.

ORAL  
PRESENTATIONS

**Coffel, E. D.**, Mankin, J. S., Winter, J. M., Horton, R. M. Seasonal warming amplification and land-air coupling. AGU Fall Meeting, New Orleans, LA, 2017.

**Coffel, E. D.**, Thompson, T. R., Horton, R. M. Climate change and aircraft weight restriction. AGU Fall Meeting, New Orleans, LA, 2017.

**Coffel, E. D. (invited)**, Sherbinin, A. de, Horton, R. M., Lane, K., Kienberger, S., Wilhelmi, O. The Science of Adaptation to Extreme Heat. IAPSO-IAMAS-IAGA Assembly, Cape Town, South Africa, 2017.

**Coffel, E. D.**, Thompson, T. R., Horton, R. M. Climate change and aircraft weight restriction. AMS Annual Meeting, New Orleans, LA, 2016.

**Coffel, E. D.**, Horton, R. M., de Sherbinin, A. M. Rapid rise in heat stress exposure during the 21st century. AGU Fall Meeting, San Francisco, CA, 2015.

**Coffel, E. D.**, Horton, R. M. Climate change and the impact of extreme temperatures on aviation. ICNS 2015, Washington, DC, 2015.

**Coffel, E. D.**, Horton, R. M. Climate change and the impact of extreme temperatures on aviation. AMS Annual Meeting, Phoenix, AZ, 2015.

**Coffel, E. D.**, Horton, R. M. Climate change and the impact of extreme temperatures on aviation. AGU Fall Meeting, San Francisco, CA, 2014.

POSTER  
PRESENTATIONS

**Coffel, E. D.**, Mankin, J. S., Winter, J. M., Horton, R. M. Seasonal warming amplification and land-air coupling. AMS Annual Meeting, Austin, TX, 2018.

**Coffel, E. D.**, Thompson, T. R., Horton, R. M. Climate change and aircraft weight restriction. AMS Annual Meeting, Austin, TX, 2018.

**Coffel, E. D.**, Thompson, T. R., Horton, R. M. Climate change and aircraft weight restriction. AMS Annual Meeting, Seattle, WA, 2017.

**Coffel, E. D.**, Horton, R. M. Geographic extent of future heat waves. AGU Fall Meeting, San Francisco, CA, 2016.

**Coffel, E. D.**, Horton, R. M., de Sherbinin, A. M. Rapid rise in heat stress exposure during the 21st century. Graduate Climate Conference, Woods Hole, MA, 2015.

Morelli T. L, Palmer R., **Coffel E. D.**. Regional collaborations to combat climate change: the climate science centers as strategies for climate adaptation. AGU Fall Meeting, San Francisco, CA, 2014.

**Coffel, E. D.**, Horton, R. M. Climate change and the impact of extreme temperatures on aviation. Columbia First Year Symposium, New York, NY, 2014.

**Coffel, E. D.** Tornado Detection with Machine Learning. Northwestern Undergraduate Research Symposium, Evanston, IL, 2013.

**Coffel, E. D.** Development and Performance Analysis of a Cyclone Tracker for use in Seasonal Hurricane Prediction. NOAA Hollings Scholarship Program Conference, Silver Spring, MD, 2012.

TEACHING

**Columbia University**, New York, NY

*Teaching Assistant.* Regional Climate and Climate Impacts.

**Spring 2017**

*Teaching Assistant.* Introduction to Sustainable Development.

**Fall 2016**

*Teaching Assistant.* Dynamics of climate variability and climate change.

**Fall 2014 - 2015**

**Northwestern University**, Evanston, IL

*Instructor.* Accelerated Scientific Computing.

**Sept. 2012 – March 2013**

*Teaching Assistant.* Accelerated Scientific Computing.

**Sept. 2010 – March 2012**

WORKSHOPS

- AMS Summer Policy Colloquium. Washington, DC, Jun. 2016.
- University of Graz “Climate change thresholds” workshop. Graz, Austria, Feb. 2016.
- Northwest Climate Science Center “Climate boot camp.” Oregon, Aug. 2014.
- South Central Climate Science Center “Communicating climate change” workshop. Dallas, TX, Feb. 2014.

GENERAL PUBLICATIONS

2. **Coffel, E. D.**, 2017. *Climate change and infrastructure impacts*. Early Career Climate Forum.
1. **Coffel, E. D.**, Horton, R. M., 2017. *How hot weather and climate change affect airline flights*. The Conversation.

COMMUNICATION

**Media:** Coverage in over 500 news outlets including The New York Times, The Washington Post, The Guardian, NPR, Science, National Geographic, and Scientific American.

*Blogger.* Northwestern Science in Society.

**June 2012 – 2015**

SERVICE

**Journal referee:** Environmental Research Letters, Climatic Change, Journal of Applied Meteorology and Climatology, International Journal of Climatology, and Journal of Air Transport Management.

**Conference session organizer:** Climate change impacts on transportation. AGU Fall Meeting, 2016.

TECHNICAL SKILLS

Python, Matlab, C/C++, Java, C#, HTML/CSS, L<sup>A</sup>T<sub>E</sub>X, Unix/Linux, machine learning

PROFESSIONAL SOCIETIES

American Meteorological Society

**2013 – Present**

American Geophysical Union

**2013 – Present**