

# Ethan D. Coffel

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ACADEMIC APPOINTMENTS	<b>Dartmouth College</b> , Hanover, NH Neukom Institute Postdoctoral Fellow Departments of Geography and Earth Science	<b>Fall 2018 -</b>
EDUCATION	<b>Columbia University</b> , New York, NY Ph.D Atmospheric Science National Science Foundation Graduate Research Fellowship recipient Advisers: Dr. Radley Horton, Dr. Arlene Fiore, Dr. Richard Seager  <b>Columbia University</b> , New York, NY M.A. Atmospheric Science, May 2015  <b>Northwestern University</b> , Evanston, IL B.A. with honors, Computer Science, Integrated Science	<b>2013 - 2018</b>     <b>2009 - 2013</b>
PUBLICATIONS: DRAFTED	9. Lesk, C., <b>Coffel, E. D.</b> , Horton, R. M. <i>Sensitivity of maize yields to sub-seasonal rainfall distribution and extremes in the United States</i> . In preparation.  8. <b>Coffel, E. D.</b> , Mankin, J. S., Winter, J. M., Horton, R. M. <i>Land surface drying influences changes in heat stress</i> . In preparation.	
PUBLICATIONS: SUBMITTED	7. <b>Coffel, E. D.</b> , Keith, B., Lesk, C., Bower, E., Lee, J., Horton, R. M. <i>More frequent concurrently hot and dry years in the Nile basin despite increasing precipitation</i> . In revision at Nature Climate Change.	
PUBLISHED PEER-REVIEWED ARTICLES	6. <b>Coffel, E. D.</b> , Horton, R. M., de Sherbinin, A., 2018. <i>Temperature and humidity based projections of a rapid rise in global heat stress exposure during the 21st century</i> . Environmental Research Letters. 10.1088/1748-9326/aaa00e  5. <b>Coffel, E. D.</b> , Thompson, T. R., Horton, R. M., 2017. <i>The impact of rising temperatures on aircraft takeoff performance</i> . Climatic Change Letters. 10.1007/s10584-017-2018-9  4. Lesk, C., <b>Coffel, E. D.</b> , D'Amato, T., Dodds, K., Horton, R. M., 2017. <i>Significant threat to North American forests from Southern Pine Beetle with warming winters</i> . Nature Climate Change. 10.1038/nclimate3375  3. Horton, R. M., Mankin, J. S., Lesk, C., <b>Coffel, E. D.</b> , Raymond, C., 2016. <i>A Review of Recent Advances in Research on Extreme Heat Events</i> . Current Climate Change Reports. 10.1007/s40641-016-0042-x  2. Horton, R. M., <b>Coffel, E. D.</b> , Winter, J. M., Bader, D. A., 2015. <i>Projected changes in extreme temperature events based on the NARCCAP model suite</i> . Geophysical Research Letters. 10.1002/2015gl064914	

1. **Coffel, E. D.**, Horton, R. M., 2015. *Climate change and the impact of extreme temperatures on aviation*. AMS Weather, Climate, and Society. 10.1175/wcas-d-14-00026.1
- 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.
- OTHER 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.
- FUNDING**
- Dartmouth College Neukom Institute Postdoctoral Fellowship**, 2018 – 2020, \$131,500.  
**NASA NPP Postdoctoral Fellowship**, 2018 – 2020, NASA Goddard Institute for Space Studies, (*declined*).  
**NSF Funding for the AMS Summer Policy Colloquium**, 2016, \$5,000.  
**National Science Foundation Graduate Research Fellowship**, 2015 – 2018, \$138,000.  
**Lamont Climate Center Grant**, 2015, *Heat stress in the 21st century*, \$3,140.  
**Columbia University Graduate Student Travel Grant**, 2015, \$250.  
**Northeast Climate Science Center Fellowship**, 2013 – 2018.  
**NOAA Hollings Scholarship**, 2011 – 2013, \$24,000.  
**NASA Reduced Gravity Student Flight Opportunities Program**, 2010 – 2011.
- TEACHING**
- Dartmouth College**, Hanover, NH  
*Instructor*. Life in the Anthropocene. **Winter 2019**
- 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**
- 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.

WORKSHOPS

4. AMS Summer Policy Colloquium. Washington, DC, Jun. 2016.

3. University of Graz “Climate change thresholds” workshop. Graz, Austria, Feb. 2016.

2. Northwest Climate Science Center “Climate boot camp.” Oregon, Aug. 2014.

1. South Central Climate Science Center “Communicating climate change” workshop. Dallas, TX, Feb. 2014.

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, Geophysical 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  
American Geophysical Union

**2013 – Present**  
**2013 – Present**