

COLIN S. RAYMOND

Doctoral Candidate

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Education

- Columbia University**, New York, NY Expected May 2019
Ph.D., Ocean and Climate Physics
Advisor: Dr. Radley Horton
- Cornell University**, Ithaca, NY 2014
B.S., Atmospheric Science, Magna cum laude with Distinction in Research

Publications

PEER-REVIEWED JOURNAL ARTICLES

- Raymond, C.**, Singh, D., and Horton, R. M. (2017). Spatiotemporal patterns and synoptics of extreme wet-bulb temperature in the contiguous United States. *J. Geophys. Res. Atmos.*, 122. <https://doi.org/10.1002/2017jd027140>.
- Horton, R., Mankin, J. S., Lesk, C., Coffel, E., and **Raymond, C.** (2016). A review of recent advances in research on extreme heat events. *Curr. Clim. Change Rep.*, 2, 242-259. <https://doi.org/10.1007/s40641-016-0042-x>.

JOURNAL ARTICLES SUBMITTED OR IN PREPARATION

- Raymond, C.**, Matthews, T. K., and Horton, R. M. The emergence of heat and humidity too severe for human tolerance. Submitted to *Nature*, Sep. 2018.
- Raymond, C.**, and Mankin, J. S. Coastal moderation of extreme heat in the eastern United States. Submitted to *Geophys. Res. Lett.*, Sep. 2018.
- Raymond, C.**, Hacker, J., Cai, C., and Li, D. Identifying sea-breeze fronts in regional climate model simulations. In prep.

BOOK CHAPTERS

- Raymond, C.**, Foreman, T., King, A., Kornhuber, K., Lesk, C., Mora, C., Perkins-Kirkpatrick, S., Russo, S., and Vijverberg, S. (2018). Projections and hazards of future extreme heat. In *Planning for Climate Change Hazards*. Oxford University Press.

Presentations

- Raymond, C.**, Horton, R., and Singh, D. Spatiotemporal patterns and synoptics of extreme wet-bulb temperature in the contiguous United States. European Geophysical Union General Assembly 2018 (Vienna, Austria). *Oral*.
- Raymond, C.**, and Mankin, J. Climatological occurrence and projected changes of cold-shore days along the eastern coast of the United States. European Geophysical Union General Assembly 2018 (Vienna, Austria). *Poster*.
- Raymond, C.** Parameterization and projection of sea breezes in New York City. Rutgers Climate Symposium 2017 (New Brunswick, NJ). *Poster*.
- Raymond, C.**, and Horton, R. Sea breezes and New York City heat waves: interactions, effects, and predictability. American Meteorological Society Annual Meeting 2017 (Seattle, WA). *Oral*.

Raymond, C., Horton, R., and Singh, D. Co-occurrence of extreme temperature and moisture over the continental United States. American Meteorological Society Annual Meeting 2017 (Seattle, WA). *Poster*.

Raymond, C., and Horton, R. Predictability and spatial characteristics of New-York-City-area heat waves. American Geophysical Union Fall Meeting 2016 (San Francisco, CA). *Poster*.

Raymond, C., and Ming, Y. (2014). Changes in precipitation extremes under two climate-change scenarios. American Meteorological Society Annual Meeting 2014 (Atlanta, GA). *Oral*.

Professional Service

Journal Referee: Journal of Geophysical Research: Atmospheres; Geophysical Research Letters; Journal of the American Planning Association

Session Chair, European Geophysical Union General Assembly 2019 2018-19
• "Extreme heat events: processes, impacts and adaptation"

Workshop Co-Organizer, *Meteorology and Impacts of Correlated Climate Extremes* 2017-19
• 100-person international workshop scheduled to take place at Columbia University in May 2019

Expert Reviewer, IPCC Special Report on 1.5 Degrees Draft 2017

Session Chair, AMS Student Conference Planning Committee 2015-16
• Organized seminar topics, speaker invitations, and logistics for 2016 conference

Fellowships and Awards

Lead Teaching Fellowship (\$2,000), Columbia University 2017-18

Teaching Observation Fellowship (\$2,000), Columbia University 2016-17

Research Grant (\$10,000), Columbia Climate Center 2015

Dean's Fellowship (\$78,000 annually), Columbia University 2014-19

Hollings Scholarship (\$8,000 annually), NOAA 2012-14

Teaching

Teaching Assistant, Dinosaurs and the History of Life Spring 2017
• Organized, ran, and graded labs for a freshman science course, and held office hours.

Teaching Assistant, Dynamics of Climate Variability and Climate Change Fall 2016
• Graded assignments and held office hours for a Master's-level science course.

Teaching Assistant, Earth's Climate System Spring 2016
• Organized, ran, and graded labs for a sophomore science course, and held office hours.

Selected Coursework

Atmospheric Science: dynamics (3 sem.) • thermodynamics (2 sem.) • chemistry (2 sem.) • physical, synoptic (2 sem.), & tropical meteorology • microclimatology • instrumentation • forecasting

Physics: quantum mechanics • waves • electromagnetism • special relativity

Computer Science: research computing • climate modeling • numerical physics • data analysis (MATLAB, R, and Python) • Fortran

Mathematics: linear algebra • differential equations • multivariable calculus • statistics

Other Geoscience: physical oceanography (2 sem.) • paleoclimate (2 sem.) • remote sensing • GIS

Economics & Policy: microeconomics • agricultural economics • trade theory • health economics

Outreach

Microteaching Facilitator , Columbia University	2018-19
ESL Conversation Partner , Catholic Charities International Center, New York, NY	2015-18
ESL Instructor , Catholic Charities International Center, New York, NY	2015-16
Graduate-Student Mentor , Columbia University	2015-16

Professional Memberships

American Meteorological Society, 2011-18 • **American Geophysical Union**, 2014-18
Urban Climate Change Research Network, 2017-18 • **New York Academy of Sciences**, 2014-18

Campus Memberships

STEM Education Research Journal Club	2017-18
Chevron Student Initiative Fund Committee	2016-18
Columbia University Research-As-Art Colloquium Committee	2014-15

Languages

Programming: MATLAB • Python • R • IDL • Fortran • STATA

Foreign: French • Spanish

Personal

Website: www.theurbanclimatologist.com

Discussion of topical issues in urban climatology and related physical and social sciences, and analysis pertaining to recent weather events or noteworthy climate impacts.

Github: www.github.com/cr2630git

Matlab and Python code supporting my various projects.

Twitter: @UrbanClimo

Engagement around current weather and climate stories.