

Thérèse (Tess) S. Carter
Department of Civil & Environmental Engineering, Massachusetts Institute of Technology
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EDUCATION

Ph.D., Atmospheric Chemistry and Physics

Massachusetts Institute of Technology, Cambridge, MA

Expected August 2022

Sc.B., Chemistry with honors

Brown University, Providence, RI

2016

PROFESSIONAL EMPLOYMENT

National Climate Assessment (NCA)

Washington, DC, 2013-2017

NCA Program Coordinator, ICF Contractor (Research Analyst)

2016-2017

- Coordinated 8 NCA4 chapters, including air quality, forests, ecosystems, agriculture, and tribal and indigenous communities

Student Assistant, UCAR/ICF International Contractor

2013-2016

PUBLICATIONS

Carter, T.S., C.L. Heald, et al. Investigating Carbonaceous Aerosol and its Absorption Properties from Fires in the western US (WE-CAN) and southern Africa (ORACLES and CLARIFY), submitted.

Carter, T.S., E. Joyce, and M.G. Hastings. Quantifying Nitrate Formation Pathways in the Equatorial Pacific Atmosphere from the GEOTRACES Peru-Tahiti Transect, submitted.

Carter, T.S., C.L. Heald, J.L. Jimenez, P. Campuzano-Jost, Y. Kondo, N. Moteki, J.P. Schwarz, C. Wiedinmyer, A.S. Darmenov, A.M. da Silva, and J.W. Kaiser (2020), How emissions uncertainty influences the distribution and radiative impacts of smoke from fires in North America, *Atmos. Chem. Phys.*, 20, 4, 2073-2097.

Avery, C.W., **T.S. Carter**, K.L.M. Lewis, K. Reeves, and D.R. Reidmiller, 2018: Report Development Process. In *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA. doi: 10.7930/NCA4.2018.AP1

Carter, T., Clark, C., Fenn, M., Jovan, S., Perakis, S., Riddell, J., Schaberg, P., Greaver, T., and M. Hastings (2017), Mechanisms of nitrogen deposition effects on temperate forest lichens and trees, *Ecosphere*, 8, 3:e01717.

AWARDS AND HONORS

2nd Place, Peter B. Wagner Memorial Award for Women in Atmospheric Sciences

2020

Ida M. Green Fellowship, MIT

2017-2018

Sigma Xi Science Honors Society

May 2016

Voss Undergraduate & Royce Fellowships, Brown University
Udall Scholarship Honorable Mention
AGU Student Travel Grant & Research at Brown (RAB) Grant

Summer 2015
Spring 2015
Fall 2014

PRESENTATIONS

American Geophysical Union (AGU) Annual Meeting (Virtual, December 2020)

- *Talk*: Investigating fire aerosol and its absorption properties in the western US & southern Africa
Co-organizer & Panelist, Brown University IBES Webinar (Virtual, Dec 9, 2020)
 - Through the Fire and Smoke: Causes, Consequences, and Solutions to Western U.S. Wildfires
- MIT Department of Civil & Environmental Engineering Seminar (Cambridge, MA, April 24, 2020)
- *Invited Talk*: Investigating the representation of smoke and implications for air quality and climate
American Geophysical Union (AGU) Annual Meeting (San Francisco, CA, December 2019)
- *Poster*: Investigating carbonaceous aerosol in the western US (WE-CAN) and in Africa (ORACLES)
9th International GEOS-Chem Conference (Cambridge, MA, May 9, 2019)
- *Talk*: Investigating biomass burning aerosol in North America
American Meteorological Society Conference (Phoenix, AZ, January 10, 2019)
- *Talk*: Investigating biomass burning aerosol in North America
International Global Atmospheric Chemistry (IGAC) Conference (Takamatsu, Japan, Sep. 2018)
- *Poster*: Investigating biomass burning aerosol in North America
MIT Emergency Operations Center (Cambridge, MA, August 2018)
- *Talk* on wildfires and their air quality impacts to MIT emergency managers
And many others prior to 2017 related to the National Climate Assessment and undergrad work

TEACHING EXPERIENCE (Teaching Assistant)

1.092: Travelling Research Environmental eXperience (TREX) for Undergrads, MIT Jan 2020
ENVS 0510: International Environmental Law and Policy, Brown University Fall 2015

SERVICE & PROFESSIONAL ACTIVITIES

<u>MIT</u>	Co-organizer, MIT Atmospheric Chemistry Colloquium	2020-
	Participant, MIT Science Policy Initiative Congressional Visit Days (CVD)	March 2020
	Research mentor, Undergraduate Research Opportunities Program (UROP)	2019-2020
	Associate Editor, Journal of Science Policy and Governance	2019-
	Participant, MIT Science Policy Initiative Executive Visit Days (ExVD)	Fall 2018
	Co-organizer, Mini-Undergraduate Research Opportunities Program (UROP)	2018
	Manuscript reviewer for <i>Scientific Reports</i> and <i>Water Environmental Research</i>	
<u>NCA</u>	Convener, National Adaptation Forum session, <i>Sustained Assessment</i>	2017
<u>Brown</u>	Advisory Council Member, Institute at Brown for Environment and Society	2016-
	Co-chair, Chemistry Department Undergraduate Group	2014-2016
	Student Roundtable with Secretary of the Interior Sally Jewell	2014
	Mentor, Women in Science and Engineering (WiSE) Peer Advising	2013-2016
	Mentor, Meiklejohn Peer Advising for Freshmen	2013-2016