

PEIDONG WANG

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RESEARCH INTEREST

Chemistry-climate coupling, air-sea interaction, physical oceanography, atmospheric chemistry, climate modeling.

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA 2019 - Present
PhD student in Climate Science
Advisor: Dr. Susan Solomon

University of Wisconsin-Madison, Madison, WI 2015 - 2019
B.S. in Atmospheric & Oceanic Sciences Cumulative GPA: 4.0/4.0
B.S. in Applied Mathematics Dean's List: 8/8 semesters
Certificate in Computer Science
Advisor: Dr. Tracey Holloway
Thesis: Satellite Observations to Quantify Natural Emissions of Air Pollutants

RESEARCH EXPERIENCE

Undergraduate Research Assistant Sept 2016 - May 2019
Center for Sustainability and the Global Environment (SAGE)
University of Wisconsin-Madison, Madison, WI
Advisor: Dr. Tracey Holloway

- Analyzed spatial-temporal variability of atmospheric ambient formaldehyde over the U.S. from 2006 - 2015, both from ground monitor stations (EPA AQS) and satellite observations (OMI).
- Worked on using cloud computing (Amazon Web Services) to perform oversample software (WHIPS) that maps Level 2 satellite products to custom-gridded Level 3 products. Modified WHIPS to enable mapping OMI SO₂ data.
- Evaluating the 2014-15 Icelandic volcanic eruption from numerical model simulations (GFDL AM3 and AM4) with satellite observations (OMI).

Summer Student Fellow May 2018 - Aug 2018
Department of Physical Oceanography
Woods Hole Oceanographic Institution, Woods Hole, MA
Advisor: Dr. Caroline Ummenhofer

- Combined fully-coupled global climate model (CESM LME) with a newly developed tree-ring network in Labrador to study North Atlantic hydroclimate response to volcanic eruptions in the last millennium.

TEACHING EXPERIENCE

Teaching Assistant

Jan 2017 - Dec 2017

Department of Computer Sciences

University of Wisconsin-Madison

CS 302 Introduction to Programming (Spring 2017) & CS 200 Programming I (Fall 2017)

- Met with ~40 students in weekly lab sections, reviewed course materials and guided students in lab assignments.
- Held office hours every week helping students debug programs, answering questions through web-based Q&A service (Piazza), and organizing exam review sessions.

HONORS AND AWARDS

Jule Charney Prize	2019
MIT Presidential Fellowship	2019 - 2020
Theodore Herfurth Award for Initiative and Efficiency	2019
Phi Beta Kappa Membership	2019
University Book Store Excellence Award	2019
Princeton HeldFest Travel Scholarship	2018
Woods Hole Oceanographic Institution Summer Student Fellow Travel Award	2018
Lyle Horn Scholarship Award	2018
Woods Hole Oceanographic Institution Summer Student Fellowship	2018
Honorable Mention in the Mathematical Contest in Modeling (MCM)	2018
Wisconsin Hilldale Undergraduate/Faculty Research Fellowship	2017 - 2018
Honorable Mention in the Interdisciplinary Contest In Modeling (ICM)	2017
Undergraduate Winner in AOSS* Community Poster Session	2017
Second Place in 2017 AOSS* Photo Contest	2017

* *Atmospheric, Oceanic and Space Sciences*

CONFERENCES AND PROFESSIONAL TRAININGS

American Geophysical Union Fall Meeting, Washington D.C.	Dec 2018
Symposium on Understanding and Modeling the Earth's Climate, Princeton University, NJ	Oct 2018
NCAR Fundamentals of Atmospheric Chemistry and Aerosol Modeling Workshop, Boulder, CO	Aug 2018
NASA HAQAST 3 rd Meeting, Columbia University, NY	Nov 2017
Unidata Regional Python Training Workshop, Madison, WI	Jun 2017
Nelson Institute Earth Day Conference, Madison, WI	Apr 2017

PUBLICATIONS

- [1] **Peidong Wang** and Tracey Holloway. GFDL AM3/AM4 Model Evaluation of the 2014 Holuhraun Eruption. *Report to GFDL*.

- [2] **Peidong Wang**, Tracey Holloway, and Monica Harkey. Ambient Formaldehyde over the United States from Ground-based and Satellite Observations. *Journal of Geophysical Research: Atmospheres* (In revision).

PRESENTATIONS

- [1] *Synthesis of Tree-Ring Records and Coupled Climate Model Simulations to Understand North Atlantic Hydroclimate Responses to Volcanic Eruptions in the Last Millennium*. 2018 American Geophysical Union Fall Meeting, Washington D.C., Dec 2018.
- [2] *The Role of Volcanic Forcing in the North Atlantic Hydroclimate Over the Last Millennium*. Poster Presentation. Understanding and Modeling the Earth's Climate: A Symposium in Honor of Isaac Held, Princeton University, NJ, Oct 2018.
- [3] *Linking Atmospheric Chemistry to Climate Change*. Oral Presentation. Atmospheric and Oceanic Sciences Department Seminar, UW-Madison, WI, Sept 2018.
- [4] *North Atlantic Hydroclimate Responses to Volcanic Eruptions*. Oral Presentation. Department of Physical Oceanography, Woods Hole Oceanographic Institution, MA, Aug 2018.
- [5] *Ambient Formaldehyde over the United States from Ground-based and Satellite Observations*. Oral Presentation. 2018 Annual Undergraduate Symposium, UW-Madison, WI, Apr 2018.
- [6] *Air Toxics Observed from Space, and Comparisons to Ground Measurements*. Oral Presentation. Climate, People, and Environment Program seminar, UW-Madison, WI, Feb 2018.
- [7] *Formaldehyde Trend Analysis from OMI Satellite Observations and AQS Ground Measurements*. Poster Presentation. NASA Health and Air Quality Applied Sciences Team (HAQAST) 3rd. meeting, Columbia University, NY, Nov 2017.
- [8] *Characterizing Ambient Formaldehyde over the United States*. Poster Presentation. 11th Annual Nelson Institute Earth Day Conference: Hope and Renewal in the Age of Apocalypse, UW-Madison, WI, Apr 2017.
- [9] *Characterizing Ambient Formaldehyde over the United States*. Poster Presentation. Atmospheric, Oceanic and Space Sciences Poster Reception, UW-Madison, WI, Apr 2017.

TECHNICAL SKILLS

Programming	Python, Matlab, NCL, Java, HTML/CSS, Linux/Unix
Editing	L ^A T _E X, Microsoft Word/Excel/PowerPoint
Design	Adobe Illustrator/Photoshop

COMMUNITY ACTIVITIES

Member, American Geophysical Union (AGU)	Dec 2017 - present
Member, American Meteorology Society (AMS)	Dec 2016 - present
Member, UW-Madison Fishing Team	Sept 2015 - Feb 2017
Volunteer, The 9 th International Symposium on Molecular Breeding of Forage and Turf, China	Aug 2016