Brendan Clark

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CURRENT APPOINTMENT

Research Assistant | Rutgers Impact Studies of Climate Intervention (RISCI) laboratory

EDUCATION

Ph.D. | Atmospheric Science | Rutgers University |2024
Advisors: Professors Alan Robock and Lili Xia

M.S. | Atmospheric Science | Rutgers University | 2022 | GPA: 3.90

B.S. | Environmental Science | University of Massachusetts Amherst | 2020
John and Abigail Adams Scholarship

PUBLICATIONS

B. Clark, L. Xia, A. Robock, et al. Stratospheric sulfate aerosol climate intervention could negatively impact the nutritional quality of maize and rice. *Nature*. *In prep*

B. Clark, L. Xia, A. Robock, et al. Maize yield changes under sulfate aerosol climate intervention using three global gridded crop models. *Earth's Future*. *In review*

N. Grant, **B. Clark**, A. Robock, et al. Impacts on Indian agriculture due to stratospheric aerosol intervention using agroclimatic indices. *Earth's Future. In press*

B. Clark, L. Xia, A. Robock, et al. Optimal climate intervention scenarios for crop production vary by nation. *Nature Food,* **4**, 902–911 (2023). 10.1038/s43016-023-00853-3

F. Bowlick, **B. Clark**, et al. Understanding geocomputation education: A survey and syllabi informed review. *Research in Geographic Education,* **23**, 20-51 (2022).

PRESENTATIONS

Talks

"Crop Impacts from Stratospheric Aerosol Injection: A Multi-Scenario Overview"
ISIMIP-GGCMI Workshop | University of Potsdam, Germany | May 2022

"Discrepancies Between Fully Coupled and Offline CLM5 Crop Simulations"
NCAR Land Modeling Working Group Meeting | Boulder, CO | January-February 2022

"Depicting Information and Remembering Your Audience: Impacts on Crop Production from Stratospheric Aerosol Climate Intervention"
Climate Engineering in Context Conference | University of Potsdam, Germany | October 2021

"The Optimal Climate Intervention Scenario for Crop Production Varies by Nation"
Solar Climate Intervention Symposium | University of Exeter, UK | June 2023

"A Proposal for a Multi-Crop Model Assessment of Stratospheric Aerosol Climate Intervention"
AgMIP-GGCMI meeting | Columbia University, NY | June 2023

"Stratospheric Aerosol Climate Intervention Could Negatively Impact Crop Nutritional Quality"
American Geophysical Union | San Francisco, CA | December 2023

"Stratospheric Aerosol Climate Intervention Impacts on Crop Protein Content"
Gordon Research Conference | Barga, Italy | February 2024

Posters

"Impacts on Crop Production from Stratospheric Aerosol Injection"
American Geophysical Union | New Orleans, LA | December 2021

"Can Crop Production be used as a Metric to Design Climate Intervention?"
American Geophysical Union | Chicago, IL | December 2022

"Impacts on Crop Production from Stratospheric Aerosol Climate Intervention: A Multi-Scenario Overview"
Gordon Research Conference | Newry, ME | June 2022

"Rutgers Impact Studies of Climate Intervention (RISCI) Laboratory Group Overview"
Geoengineering Modeling Intercomparison Project annual meeting| University of Exeter, UK | June 2023

"Stratospheric Aerosol Climate Intervention Could Negatively Impact Crop Nutritional Quality"
Gordon Research Conference | Barga, Italy | February 2024

"Sulfate Aerosol Climate Intervention Impacts on Maize Yield and Protein in Three Global Gridded Crop Models"
Geoengineering Modeling Intercomparison Project annual meeting |Cornell University, NY | July 2024

"Stratospheric Aerosol Climate Intervention Could Reduce the Nutritional Value of Maize and Rice"

American Geophysical Union | Washington D.C. | December 2024

RESEARCH EXPERIENCE

Graduate Research Assistant | Dr. Alan Robock | New Brunswick, NJ | 2020-present

- Researching climate change and climate intervention impacts on crop production and quality by utilizing global climate models and global crop models

Undergraduate Research Assistant | Dr. Matthew Winnick | Amherst, MA | 2019-2020

- Analyzed methane and nitrous oxide emissions from shale samples using gas chromatography to understand greenhouse gas emissions associated with fracking

Undergraduate Research Assistant | Dr. Forrest Bowlick | Amherst, MA | 2018-2019

- Created a survey and conducted interviews to understand how forestry professionals are utilizing GIS tools to adapt to climate change

TEACHING EXPERIENCE

Guest Lecturer

Climate Modeling | Rutgers University | Fall 2023

Teaching Assistant

Geographic Information Systems | UMass Amherst | Fall 2019

Substitute Teacher

Algonquin Regional High School | Northborough, MA | 2019-2020

HONORS AND AWARDS

Stanley Z. Koplik Certificate of Mastery with Distinction Award | May 2016

Governor's Citation in Recognition of Energy and Environmental Stewardship in Massachusetts | August 2019

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Geophysical Union

Atmospheric Sciences Section | 2020-present

PARTICIPATION IN INTERNATIONAL EXPERIMENTS

Agricultural Modeling Intercomparison Project

2020-present

Global Gridded Crop Model Intercomparison

2020-present

Geoengineering Modeling Intercomparison Project
2020-present

Climate Intervention Biology Working Group
2020-present