

MARTA FAULKNER

300 Forrestal Rd, 304A Sayre Hall, Princeton, NJ 08540
mmfaulkner@princeton.edu

EDUCATION

Princeton University, Princeton, NJ

PhD Student in Atmospheric and Oceanic Sciences

Advised by Dr. Stephen M. Griffies

August 2021-present

Cornell University, College of Arts and Sciences, Ithaca, NY

Bachelor of Arts in Mathematics May 2020: *Cum laude*

Bachelor of Arts in Music May 2020: *Summa cum laude*

GPA: 4.0/4.3 | Dean's List | Distinction in all subjects | Phi Beta Kappa Honors Fraternity

University of St Andrews, St Andrews, Scotland

Spring 2019 study abroad; School of Mathematics and Statistics

RESEARCH EXPERIENCE

Polar Oceanography Lab Assistant

October 2020-July 2021

Scripps Institution of Oceanography, San Diego, CA

- Straneo High Latitude Oceans and Climate Group
- Processing and analysis of data from Sermilik Fjord, Greenland, including towed CTD surveys of icebergs

Summer Student Fellow

May-August 2019

Woods Hole Oceanographic Institution (WHOI), Woods Hole, MA

- Advised by Dr. Michael Spall in WHOI's physical oceanography department
- Developed analytical study of Arctic sea ice dynamics and thermodynamics using a simplified mathematical model and numerical methods
- Presented poster at 2020 Ocean Sciences Meeting: "On the seasonal cycle of sea ice in the eastern Arctic Ocean," coauthored with Dr. Michael Spall (WHOI)—paper in progress

Research Experience for Undergrads (REU) Intern

May-August 2018

Virginia Institute of Marine Science (VIMS), Gloucester Point, VA

- Advised by Dr. Donglai Gong in Coastal and Polar Physical Oceanography lab
- Developed MATLAB simulation of freshwater transport in the Arctic using surface current output from the Navy's Hybrid Coordinate Ocean Model (HYCOM)
- Presented research results at 2018 American Geophysical Union Fall Meeting
- Continuing to work on a paper based on this summer research

OTHER EMPLOYMENT

Our Changing Menu: Website Development

April 2020-July 2021

Cornell University, Ithaca, NY

- *Ourchangingmenu.com* supplements a recent book by Cornell professors, *Our Changing Menu*, about the impact of climate change on our favorite foods
- Developed from scratch a searchable ingredient database with information about climate change effects on specific foods
- Use PHP, JavaScript, SQL, HTML, Divi and Wordpress to manage and develop site

**ACTIVITIES/
LEADERSHIP/
HONORS**

Down to Earth: Climate Podcast

August 2018-May 2020

Cornell Center for Climate Smart Solutions, Ithaca, NY

- Developing, producing and marketing a student-led podcast on climate change and environmental topics
- Podcast was adopted as supplemental course material by two Cornell professors
- Episodes include: Ocean Science series, Haiti and the Environment, Youth Climate Movements, Interviews from the 2018 American Geophysical Union Fall Meeting
- Composed the theme song

Polar Center Equity, Diversity and Inclusion Team

Nov. 2020-June 2021

Scripps Institution of Oceanography

Outreach and education working group

- Collaborated with students, faculty and staff to lay out a plan for improving equity, diversity and inclusion in the polar science community at Scripps
- Presented plan for community input and approval; distributed report on finalized plan with timelines for objectives and accountability plan
- Objectives included: community covenant/code of conduct, field work safety and equity resources on website, development of polar science educational resources

Unlearning Racism in Geoscience (URGE) Pod

January-May 2020

Scripps Institution of Oceanography

- National effort to improve and institute actionable anti-racist policies and practices in geoscience organizations and institutions
- With engagement from Scripps administration, developed tangible resources and policy recommendations guided by research and expert opinions distributed by the URGE network, including:
 - code of conduct and comprehensive reporting resources document
 - resource map for new members of Scripps community
 - audit of policies for working with communities of color

Honors Thesis in Music, Cornell University

May 2020

Salvation on a Secular Stage: Prayer in Opera, *Summa cum laude*

An intersectional study of music theory, dramatic analysis, feminism and theology

Lux Choir, Princeton University

September 2021-present

Chapel choir for Episcopal Chaplaincy at Princeton

Cornell University Chorus

August 2016-May 2020

Student-organized, touring university choir

Assistant Tour Sales Manager, Spring 2017

Co-Recruitment Chair, Spring 2017-Spring 2018

Cornell University Wind Symphony

Aug. 2018-Jan. 2019

Service-learning tour to Haiti and the Dominican Republic, Winter 2019

Recyclemania Campus Sustainability Initiative

2017-2018

Steering committee member: developed educational materials for improving recycling habits

Congress-Bundestag Youth Exchange Scholarship

2015-2016

Federally funded scholarship for a one-year student exchange to Germany