

# 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  
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)

**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

## 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

**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

**ACTIVITIES/  
LEADERSHIP/  
HONORS**

**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

**Episcopal Church at Princeton**, Princeton University September 2021-present

Led discussion series on climate change for grad student fellowship

Member of Lux Choir for Sunday services

**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