



# Sawyer Brand

Researcher and Research Assistant

Physical Oceanography (and Mathematics) undergraduate at Scripps Institution of Oceanography with years of research and research assistant experience. Very familiar with research cruise planning and post-cruise operations. Experienced with project managing through engineering internship. Extremely dedicated and willing to learn.

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🌐 sawyerbrand.github.io/

🔄 github.com/SawyerBrand

## EDUCATION

### Major: Oceanic and Atmospheric Sciences Scripps Institution of Oceanography

07/2017 - Present

#### Achievements

- Honors Thesis on CO2 and Heat flux in Subtropical South Atlantic (topic may still change).
- Multiple graduate courses taken and received high grades.
- 3.83 upper division GPA.
- Magna Cum Laude graduation expected.

### Minor: Mathematics

#### University of California, San Diego

05/2020 - Present

#### Courses

- Complex analysis, partial differential equations, and linear algebra.

### High School: Independent Study

#### Santa Rosa Junior College

07/2009 - 06/2017

#### Achievements

- High school course of study completed at the local Junior College.
- 115 units taken and a 4.3 high school GPA received.

## WORK EXPERIENCE

### Researcher SOCCOM

11/2018 - Present

#### Achievements/Tasks

- First author on BGC Argo research paper to be submitted on 10/20/20.
- Exploration and analysis of BGC Argo float data.
- Exploration and analysis of how BGC Argo data can be used to observe later mixing within the SAMOC.
- Usage of WOCE and All Argo data.

Contact: Dr. Lynne Talley (or Channing Prend) -  
ltalley@ucsd.edu (or cprend@ucsd.edu)

## SKILLS

Experience Submitting to GRL

Programming: Python

Programming: Matlab

Programming: C++

Research Cruise Organization

Research Experience: Argo

Research Experience: Hydrographic Data

Public Speaking

Project Management

Communications

## RESEARCH INTERESTS

Polar Oceanography

Meridional Overturning Circulation

BGC Argo Data

Argo Data

Eddy Generation

Eddy Decay

Malvinas-Brazil Confluence Dynamics

Climate Models

Machine Learning (applied to climate models and other climate science data)

## ACHIEVEMENTS

### Ocean Science Meeting 2020 (02/2020 - 02/2020)

Presented original research at the Ocean Science Meeting in San Diego.

### AGU 2020 (10/2020 - 10/2020)

Will be presenting original research again at the American Geophysical Union meeting (virtual).

## ORGANIZATIONS

### Southern Ocean Carbon and Climate Observation and Modeling (SOCCOM) Project (07/2018 - Present)

Research Assistant and Researcher

### University of California, San Diego (02/2018 - 07/2019)

Carbon Neutrality Intern - Head Intern

## WORK EXPERIENCE

### Co-Author

#### Scripps Institution of Oceanography

07/2020 - Present

##### Achievements/Tasks

- Co-author and mentor to undergraduate researcher working on a technical paper.
- Paper focused on utilizing SOCCOM's climate model (B-SOSE) to improve QC-ing of BGC Argo data.

Contact: Matt Mazloff - mmazloff@ucsd.edu

### Research Assistant

#### SOCCOM

07/2018 - Present

##### Achievements/Tasks

- Organizing and planning research cruises.
- Organizing and publishing data taken on research cruises.
- Post-cruise reports (writing and editing).
- Assisted Lynne Talley with designating deployment locations for SOCCOM BGC Argo floats.

Contact: Dr. Lynne Talley - ltalley@ucsd.edu

### Head Climate Neutrality Intern Facilities Management, UCSD

03/2017 - 08/2018

##### Achievements/Tasks

- Responsible for tracking UCSD's photovoltaic solar panel energy generation and expenditure.
- Project manager for possible biodigester for UCSD campus.
- Helped run a freezer exchange program for all UCSD and Scripps labs.

Contact: Michelle Perez - mcperez@ucsd.edu

## ORGANIZATIONS

### Chess for Kids (06/2012 - 08/2018)

Instructor

### Golden Gate Raptors Observatory (06/2013 - 06/2015)

Unofficial Intern

## PERSONAL PROJECTS

### Ocean Scientists for Informed Policy

#### Human Powered Submarine (08/2019 - Present)

- Main programmer (on and off) for the UCSD Human Powered Submarine Team -- an engineering club on campus -- using mostly Matlab.
- Began a machine learning project in Python to improve propeller shape and size.