GENERAL INFORMATION

Program sponsor: Princeton Environmental Institute

Position number: C1SCR

Project title: Biological Productivity over Maud Rise in the Weddell Sea

Organization/research group: Scripps Institution of Oceanography, University of California San Diego

Primary location(s) of internship: La Jolla, California

Additional cities and/or countries to be visited (if applicable): n/a

Note: If this internship is located in a country with an International SOS risk rating of High or Extreme, final candidates must participate in a travel review process overseen by the Travel Oversight Group (TOG), and obtain safety guidance prior to departure. The University reserves the right to revoke support and funding for travel at any time there has been a significant deterioration in the safety and security conditions surrounding travel arrangements, or in the sector of the country, or countries, where travel is to occur.

FACULTY SPONSOR(s)/HOST INFORMATION

Name(s): Sarah Gille and Lynne Talley

University Department(s): Scripps Institution of Oceanography

E-mail: sgille@ucsd.edu

Phone: 858-822-4425

Website:

INTERNSHIP/RESEARCH PROJECT INFORMATION

Internship/project description:

This project will explore biological-physical interactions near Antarctica as part of the Southern Ocean Carbon and Climate Observations and Modeling project (SOCCOM). The Weddell Sea is normally ice covered, but in some years a polynya (a patch of open water) appears, located over a sea mount called Maud Rise. Autonomous float measurements of the most recent polynya show evidence of enhanced vertical mixing, and an early spring bloom, with higher levels of chlorophyll-a and significant nitrate depletion. The project will make use of the profiling float data as well as numerical model output to examine the physics driving the mixing and the biological response.

Student's role and responsibilities:

The student will work as part of a team of SOCCOM researchers at Scripps to carry out a research project examining float profile data. The project will involve coding in either python or Matlab, sharing research results, and interpreting findings in the context of other research from the region.

The intern will work closely with a Scripps Institution of Oceanography graduate student and will interact (e.g. via skype) with SOCCOM investigators at the University of Washington, Princeton, and the Monterey Bay Aquarium Research Institute.
Internship/project learning objectives:
During the internship the student will improve programming and analysis skills and will learn about the process of carrying out academic research. The project will put into practice fundamental ideas from physical oceanography, geophysical fluid mechanics, and biological oceanography.

**PROGRAM REQUIREMENTS**

**Academic background and any course pre-requisites:**
Appropriate majors in physical sciences or engineering: For example, geosciences (i.e. Environmental biogeochemistry or ocean, atmosphere & climate), physics, math, mechanical engineering, chemistry

**Technical skills:**
Prior experience in Matlab or python

**Additional training(s):**
n/a

**Equipment:**
Desirable to provide your own laptop.

**Physical demands:**
n/a

**Language abilities/competencies (if applicable):** n/a

**Additional information about the internship/project:**
n/a

**INTERNATIONAL TRAVEL REQUIREMENTS** (if applicable)

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<thead>
<tr>
<th>Visa(s) required?</th>
<th>Research permit/pass required?</th>
<th>Immunizations required?</th>
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<tbody>
<tr>
<td>Yes □ No □</td>
<td>Yes □ No □</td>
<td>Yes □ No □</td>
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**INTERNSHIP/PROJECT SUPERVISOR(S)**

**Name and title of primary supervisor:** Channing Prend

**Email:** cprend@ucsd.edu **Phone:**

**Name and title of additional supervisor, if applicable:** n/a

**E-mail:** Phone:

**PROGRAM DATES AND FUNDING INFORMATION**

<table>
<thead>
<tr>
<th>Weekly Stipend: $500</th>
<th>Number of Positions Available: 1</th>
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<tbody>
<tr>
<td>Tentative Start Date (mm/dd/yyyy): 06/23/2019</td>
<td>Number of Weeks: 9</td>
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<tr>
<td>Tentative End Date (mm/dd/yyyy): 08/23/2019</td>
<td>Note: PEI funding is for full-time work, 35 hours per week minimum, and for a period of at least 8 continuous weeks.</td>
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Application Deadline: January 11, 2019