Stanford Postdoctoral Scholar in Arctic Modeling
18 months at 100% FTE

POSITION: The Postdoctoral Scholar will lead the modeling of multiple stressors in Arctic marine systems as part of a recently funded Stanford Catalyst for Collaborative Solutions project. This position is tailored towards a Postdoctoral Scholar who is interested in engaging in interdisciplinary ocean-related modeling to support a collaborative effort at Stanford that will harness the innovations of the data revolution to produce better understanding of the likely impacts of multiple stressors on the ocean and the associated risks of abrupt state shifts.

We seek an enterprising Postdoctoral Scholar interested in working in a professional, interdisciplinary work environment. The Postdoctoral Scholar will support the Catalyst project on the development and application of a new network-based model (OSIRIS – Ocean Systems Interactions, Risks, Instabilities and Synergies) as a versatile framework for exploring the system consequences of multiple stressors.

The Postdoctoral Scholar will be supervised by Nicholas Ouellette (Civil and Environmental Engineering), Kevin Arrigo (Earth System Science) and Fiorenza Micheli (Biology and Center for Ocean Solutions) and will participate in project-focused meetings and all-staff meetings of the whole interdisciplinary team. The Postdoctoral Scholar will have the opportunity to work with social and physical scientists, lawyers, and graduate and undergraduate students supporting project work at Stanford University and with collaborators at Oxford University and at the Ocean Conservancy.

The Postdoctoral Scholar will:
1. Adapt OSIRIS to the specific case of Arctic ecosystems, including model construction, calibration and analysis;
2. Report and communicate results in publications and presentations;
3. Support cross-cutting Stanford research and Catalyst project needs;
4. Invigorate the Catalyst project with novel and diverse perspectives on modeling;
5. Bolster overall, and project-specific, capacity in the Catalyst project with modeling and analytical applications

Hours and Compensation
The Postdoctoral Scholar will be given a workspace at Center for Ocean Solutions, on Stanford's campus (Palo Alto, CA), and will be expected to work for an initial duration of 18 months, with the possibility of extending the appointment to 24 months. Compensation is 60,000-65,000$/year depending on experience and qualifications

QUALIFICATIONS: A Ph.D. in a relevant scientific field is required. We seek a self-starting Postdoctoral Scholar with excellent quantitative and computational skills with the following interests and experience:
- strong interest in understanding the ecology of polar regions, particularly the Arctic
- enthusiastic about working with an interdisciplinary research team to help address some of the grand challenges in marine and climate science

- familiarity with nonlinear dynamics and/or network science to understand the structure of the model
- familiarity with machine learning and other tools to analyze diverse data to calibrate and validate the model
- enjoys sharing ideas and communicating with different groups
- strong communication, media, and technology skills
- able to work independently, while also knowing when to seek guidance from peers and mentors
- detail-oriented, thorough and dependable

Description of Duties
The primary responsibility of the Postdoctoral Scholar is to support the link between science and policy through modeling work on the Arctic Case Study for the Catalyst project. Other tasks include:

- Participate in analyses of multiple stressor data in the Arctic
- Communicate science methods and results effectively
- Engage in the link between scientific analysis and ocean policy applications

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Applications and inquiries should be submitted electronically to:
Nicholas Ouellette (nto@stanford.edu), Kevin Arrigo (arrigo@stanford.edu) and Fiorenza Micheli (micheli@stanford.edu)