

IGERT: ADAPTATION TO ABRUPT CLIMATE CHANGE (A2C2)

University of Maine

Ph.D. assistantships available

The University of Maine is seeking outstanding applicants for a doctoral graduate training program in adaptation to abrupt climate change funded by the NSF IGERT program. This is a joint program between the Climate Change Institute and the School of Policy & International Affairs at UMaine (www.umaine.edu/a2c2igert). Abrupt climate change (ACC) is one of the greatest threats to the sustainability of human society and ecosystem services, yet economic and social systems are rarely designed for abrupt nonlinear environmental change. A critical step in human adaptation to ACC is a shift in environmental policy and management strategies capable of dealing with ACC events. This is particularly relevant for environmental security, or the relationship between the environment and the security of human societies.

To address these challenges, the A2C2 IGERT is designed to train doctoral students in **earth sciences, ecology, anthropology, archaeology, international affairs, and economics** to meet critical societal needs in human adaptation to ACC. The goals of this program are to train students to become experts and leaders on this issue in their disciplinary field, understand the dynamics of coupled natural and human (CNH) systems in response to ACC, conduct collaborative, interdisciplinary research linking natural and social sciences, and develop innovative policy solutions from their research to foster resilience and adaptation in CNH systems under ACC. Core research themes:

1) Addressing threats of abrupt climate change (ACC) to global security: U.S. military and foreign aid operations are intricately linked to climate change in that all affect where, why and how the military, and foreign emergency and development aid, will operate. Research in this arena focuses on improving climate and environmental forecasting and informing global security policy;

2) Sustaining ecosystem services under ACC: Climate change can induce state changes in ecosystems, dramatically altering ecosystem services such as food and fiber production, carbon storage, fish production, drinking water quantity and quality, and coastal erosion reduction. Research in this area focuses on understanding the response of ecosystems to ACC and informing environmental policy modifications at local, regional, and global scales;

3) Adapting economic, social, political, and ideological systems to ACC: This theme focuses on the nature and magnitude of environmental transitions, and the success of policies and societal perspectives in embracing the necessary cultural, economic and policy initiatives to achieve sustainability. Research in this area will examine the social science factors that help or hinder policy development and implementation.

Students in this program will receive an annual stipend of \$30,000 per year in each of the first 2 years, plus tuition, fees, and health insurance coverage. Students must be U.S. citizens or permanent residents to receive IGERT support.

To apply:

- 1) Review the A2C2 IGERT website to determine if the theme of the program matches your interests and goals.
- 2) Contact one of the A2C2 IGERT faculty or other UMaine faculty with interests in A2C2 (see website), discuss your interests with them, and make a decision together on whether to apply.
- 3) Apply for UMaine graduate admission in the Ph.D. program in the supporting faculty member's department/program.
- 4) Submit the following to the A2C2 IGERT program office (a2c2igert@umit.maine.edu):
 - IGERT application form (see website)
 - CV/resume
 - A letter from you describing your interest in participating in this IGERT program, whether you have experience working in multidisciplinary teams, and how your research interests relate to the IGERT project (see Core Research Themes above).
 - A letter from the prospective advisor supporting your application to the IGERT program. The prospective advisor should also indicate in their letter whether the student will need support after 2 years, and if so, clearly identify potential sources for that support.

For full consideration, submit all documents no later than **February 1** for the following academic year. Any questions about this program should be sent to the IGERT A2C2 Project Director, Dr. Jasmine Saros, jasmine.saros@umit.maine.edu