

## **Two Ph.D. positions for new NSF EarthCube project (Northern Arizona University and UC Santa Barbara)**

### **ICEBERG: Imagery Cyberinfrastructure and Extensible Building-Blocks to Enhance Research in the Geosciences**

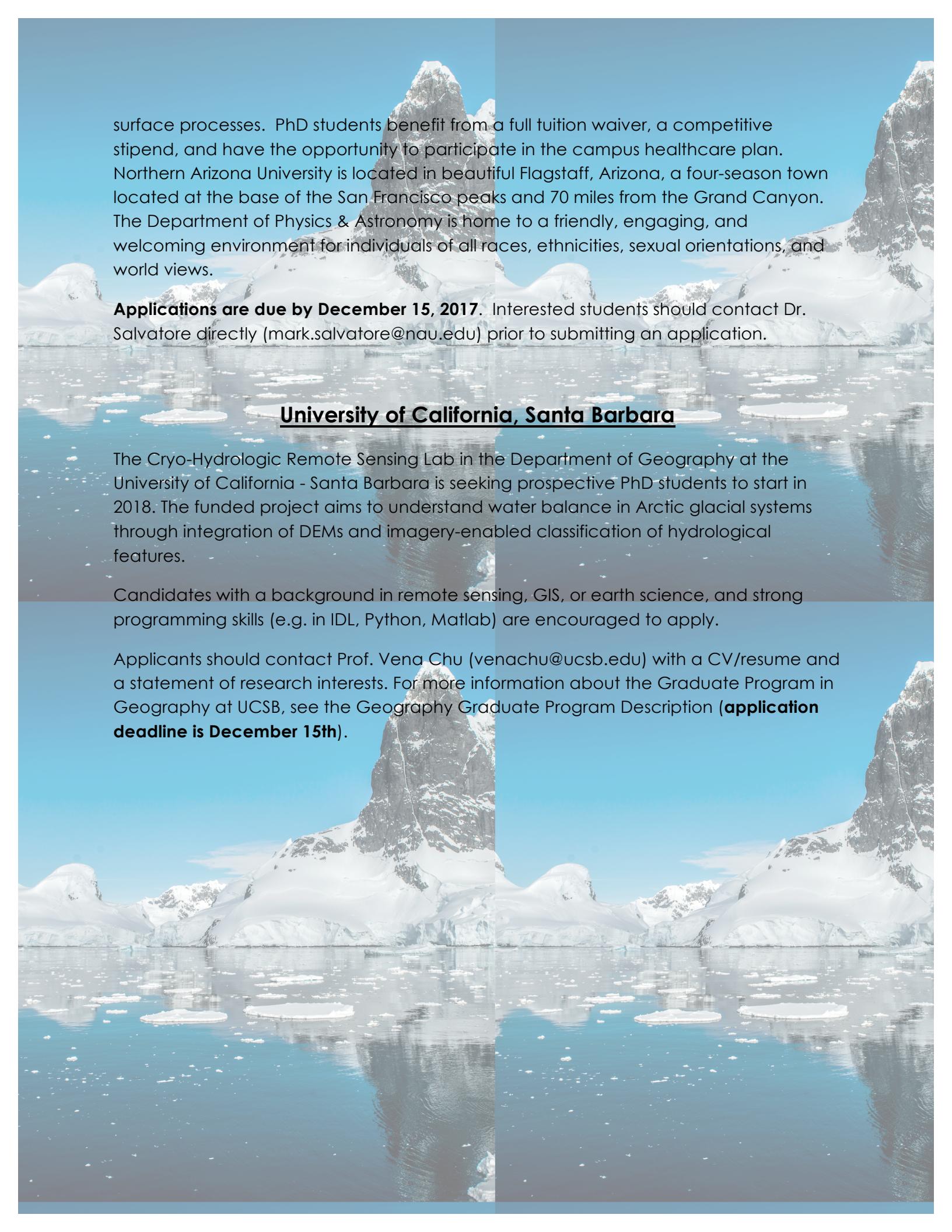
Satellite imagery is rapidly transforming the way we see the planet, including our ability to study the most remote parts of the Arctic and Antarctic. Satellite imagery can help us map networks of rivers, study changes in the flow and thickness of glaciers, identify rock and soil types, and even find animals like penguins and seals. Because the availability of imagery in polar areas has increased rapidly over the last decade, we are now faced with a challenge: How do we scale-up the scientific discoveries that have been enabled by satellite imagery to larger spatial scales? Moving from small pilot-studies to pan-Arctic or pan-Antarctic analyses of geological and biological processes requires new infrastructure to link scientists, satellite imagery, and high performance computers. This new imagery-computing superhighway will make it easier for scientists to study processes at much larger spatial scales than has been previously possible. Our project, called ICEBERG — Imagery Cyberinfrastructure and Extensible Building-Blocks to Enhance Research in the Geosciences, aims to build the cyberinfrastructure required to make the most of satellite imagery for geosciences.

Two Ph.D. positions are being recruited for this exciting and interdisciplinary project. Descriptions of each position are below. Additional PhD, post-doc and research programming positions are also being recruited for ICEBERG; prospective students, post-docs, and research programmers with an interest in combining satellite imagery and high performance computing should contact ICEBERG PI Heather Lynch ([heather.lynch@stonybrook.edu](mailto:heather.lynch@stonybrook.edu)) for more information.

#### **Northern Arizona University**

Dr. Mark Salvatore is seeking applications for a PhD student to start in the Fall of 2018. The student will work with high-resolution multispectral satellite data to identify, characterize, and map geologic units throughout the ice-free regions of Antarctica. As part of a large collaborative and federally funded project, the student will also work closely with researchers, computer programmers, and students at collaborating institutions. A successful candidate will have a strong background in surface geology, remote sensing, geographic information systems, and/or geologic mapping. Prior research experience and computer programming skills are preferred.

The student will become a member of the dynamic and evolving Department of Physics & Astronomy at Northern Arizona University. With a growing emphasis on planetary sciences, students in this program develop a deep understanding of planetary formation and evolution, remote sensing, spectroscopy, and planetary



surface processes. PhD students benefit from a full tuition waiver, a competitive stipend, and have the opportunity to participate in the campus healthcare plan. Northern Arizona University is located in beautiful Flagstaff, Arizona, a four-season town located at the base of the San Francisco peaks and 70 miles from the Grand Canyon. The Department of Physics & Astronomy is home to a friendly, engaging, and welcoming environment for individuals of all races, ethnicities, sexual orientations, and world views.

**Applications are due by December 15, 2017.** Interested students should contact Dr. Salvatore directly ([mark.salvatore@nau.edu](mailto:mark.salvatore@nau.edu)) prior to submitting an application.

### University of California, Santa Barbara

The Cryo-Hydrologic Remote Sensing Lab in the Department of Geography at the University of California - Santa Barbara is seeking prospective PhD students to start in 2018. The funded project aims to understand water balance in Arctic glacial systems through integration of DEMs and imagery-enabled classification of hydrological features.

Candidates with a background in remote sensing, GIS, or earth science, and strong programming skills (e.g. in IDL, Python, Matlab) are encouraged to apply.

Applicants should contact Prof. Vena Chu ([venachu@ucsb.edu](mailto:venachu@ucsb.edu)) with a CV/resume and a statement of research interests. For more information about the Graduate Program in Geography at UCSB, see the Geography Graduate Program Description (**application deadline is December 15th**).