A PhD Research Assistantship will be available starting in either Fall 2014 or Spring 2015 in the Environmental Science and Engineering PhD Program at the Univ. of Texas San Antonio (UTSA), San Antonio TX, USA.

A three year NSF-funded study of Coastal Polynyas and Antarctic sea ice in the Ross Sea will be conducted starting in 2014. A vessel expedition to the Ross Sea will be conducted along with an airborne campaign using airborne lidar and photography over the ice cover to obtain surface elevations of the sea ice. One aspect of the vessel campaign is to make measurements of ice thicknesses, with their corresponding surface elevations and snow depths. The purpose of these measurements is to establish algorithms with quantitative confidence limits for converting surface elevations into regional estimates of ice thicknesses. The PhD study will primarily use airborne lidar data to estimate ice thicknesses and to relate ice distribution changes to ocean and atmospheric forcing in the Ross Sea, as well as the analyses of the relevant field data to determine ice thickness from surface elevations. Other remote sensing data (e.g., MODIS and radar) will be analyzed for related ice formation processes in coastal polynyas, ice deformation and ice concentration. Analysis and integration of existing ICESat, CryoSat, and IceBridge data for the same area are also expected. Interests in sea ice geophysics, polar oceanography and remote sensing with some background in computer science, physics, and earth science is expected for best-qualified applicants. Prior experience on sea ice remote sensing is a big plus.

Formal application deadlines for the PhD admission are 1 Feb 2014 for Fall 2014 admission and 1 Oct 2014 for Spring 2015 admission. Application information is available on: http://utsa.edu/admissions/index.html. Applications should directly go through the same website.

Interested applicants should contact: Stephen.ackley@utsa.edu and Hongjie.xie@utsa.edu for questions on qualification, and if more details are needed. More information about the UTSA polar research group can be found at www.utsa.edu/LRSG.