University of Colorado at Boulder

AEROSPACE ENGINEERING SCIENCES

Seminar

Brent Minchew

NSF Postdoctoral Fellow
British Antarctic Survey, Cambridge

Observing glaciers in a warming world

Glaciers play fundamental roles in oceans, landscapes, hydrological cycles, and ecosystems but are exceptionally sensitive to changes in climate. While sought after, plausible forecasts of glacier states are currently unattainable due to an incomplete understanding of many physical processes that govern glacier dynamics. In this talk, I will discuss ongoing efforts to improve our understanding of glacier dynamics through applications of radar remote sensing. My emphasis is on new methods to acquire and exploit spatially and temporally dense radar observations, collected from aircraft and satellites, to measure the dynamical response of glaciers to environmental forcing. These observations provide synoptic-scale views of glacier flow variations that we use to constrain ice-flow models in order to infer otherwise unobservable mechanical properties.

Tuesday, May 3, 2016
12:00 – 1:00 pm
Onizuka Conference Room

Biography:

Brent Minchew is a National Science Foundation Postdoctoral Fellow at the British Antarctic Survey in Cambridge, UK. His research interests focus on remotely sensed observations of glaciers, with an emphasis on applications of synthetic aperture radar to measuring spatiotemporal variations in glacier flow in response to environmental changes. Brent is particularly interested in making unique observations targeted at specific physical phenomena and coupling those observations with physical models of glacier flow to better understand the mechanics of glaciers at the ice-bed and ice-ocean interfaces. He received a B.S. and M.S. in Aerospace Engineering from the University of Texas at Austin in 2008 and 2010, respectively, and a PhD in Geophysics from the California Institute of Technology in 2015.