

Western New York Chapter
IEEE Geoscience and Remote Sensing Society

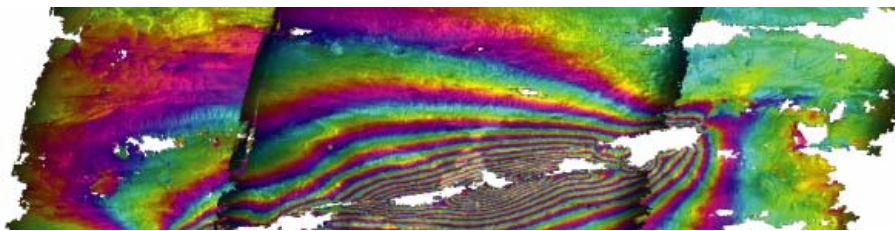
Imaging sub-centimeter ground deformation from space: Earthquakes, volcanoes, groundwater, glaciers, and some mysteries of New York State

McManus Lounge, Hollister Hall
Cornell University, Ithaca, NY
Friday, December 7, 4:00 pm
(Refreshments at 3:30 pm)

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Abstract

We use satellite-based Interferometric Synthetic Aperture Radar (InSAR) to create images of surface deformation with sub-centimeter accuracy spanning nearly 1 million square kilometers of South America with a pixel spacing of order ten meters. The talk will focus on how these observations, combined with other geophysical data, provide insights into the earthquake cycle (including evidence of a "silent" earthquake), and reveal magma movements at several supposedly dormant volcanoes. We will also touch upon the insights from these observations into other processes such as groundwater movements, glacial flow, and anthropogenic deformation. Finally, we will show the first interferograms (that we know of) from the Northeastern U.S., including central and western New York State.



Matt Pritchard's current research is focused on three main areas: 1) the subduction zone earthquake cycle; 2) magma transport; and 3) planetary geophysics. Future work includes monitoring changes in non-polar glaciers. During 2004 he was a Harry Hess postdoctoral fellow at Princeton University. In 2003, he received a Ph.D. in geophysics with a minor in planetary science from the California Institute of Technology. His B.A. degree is in physics from the University of Chicago.

See the WNY GRSS Chapter website at http://ewh.ieee.org/r1/new_york/grss/
for more details on Chapter activities and related links.