

SHORT COURSE SERIES

Processing and Analysis of GeoEarthscope and Other Community LiDAR Topography Datasets

Arizona State University, Tempe, AZ

Tuesday April 29 - Thursday May 1, 2008

LiDAR—Light, Distance, and Ranging (also Airborne Laser Swath Mapping-ALSM) topographic data are of broad interest to earth scientists. Many datasets are or will be available freely to the scientific community, especially for fault systems in the western United States via the GeoEarthscope project. These data have exciting and powerful applications in geomorphology, active tectonics, and geoscience education. Participants in this course will learn about LiDAR technology, access to publicly available datasets, software and hardware considerations for working with the data, data processing (raw or classified point clouds, digital elevation models, other derived products), and approaches for analyzing the data to answer their research questions.

Faculty: Chris Crosby, GEON Project, SDSC; Ramon Arrowsmith, Arizona State University; David Phillips, UNAVCO

Working with Strainmeter and Tiltmeter Data: A Short Course for New Users

UNAVCO, Boulder, Colorado

Tuesday June 10 - Thursday June 12, 2008

This 2.5 day workshop will cover the main topics involved in processing strainmeter data with the purpose to help make EarthScope data useful to a broad scientific audience. The target audience is graduate students and practicing scientists interested in studying plate boundary, earthquake, and volcano deformation.

Faculty: Kathleen Hodgkinson, UNAVCO; Evelyn Roeloffs, USGS; Duncan Agnew, University of California, San Diego

InSAR: An introduction to Processing and Applications for Geoscientists

UNAVCO, Boulder, Colorado

Monday June 16 - Wednesday June 18, 2008

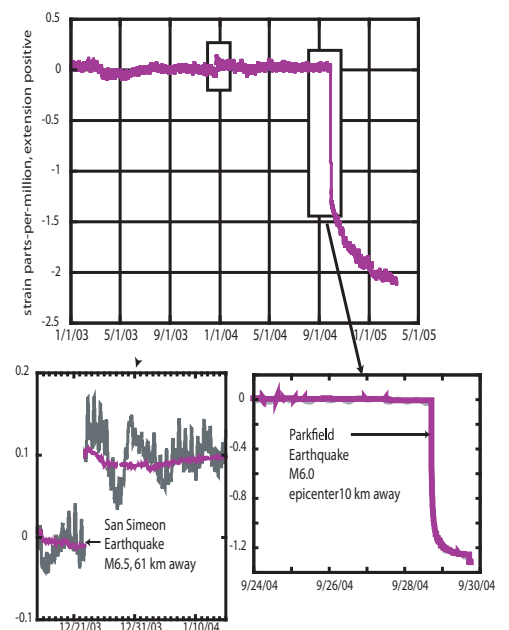
InSAR (Interferometric Synthetic Aperture Radar) is a powerful tool for measuring Earth surface deformation due to earthquakes, volcanic unrest, ground water

migration, and anthropogenic activity. InSAR is also being increasingly used in studies of cryosphere (motion of glaciers and ice sheets) and atmosphere (water content in the troposphere). New techniques and applications of InSAR are rapidly developing, including stacking, time-series analysis of surface deformation, ScanSAR, polarimetric InSAR, and along-track interferometry. A three day workshop will introduce InSAR processing and applications to new users. If you have considered using InSAR data and imagery in your research or want to learn more about how to apply InSAR to new areas of research, this workshop is for you. The workshop includes an overview of the technology and its application to Earth Science, an introduction to a common processing package, and an overview of different processing packages.

Faculty: Paul Rosen, JPL; Yuri Falko, University of California San Diego; Eric Fielding, JPL

UNAVCO, a non-profit, membership-governed consortium, supports and promotes Earth science by advancing high-precision techniques for the measurement and understanding of deformation. UNAVCO also supports education to meet the needs of the community and the public.

Parkfield Frolich Volumetric Strainmeter



Additional Info

There are no fees for these courses. Some financial assistance will be available for travel (to be determined). More details and registration pages will be available at www.unavco.org about a week after the 2008 UNAVCO Science Workshop. We have the potential for a course on GAMIT/GLOBK processing of GPS data in the fall. If you are interested in this or some other short course topic please contact Susan Eriksson at eriksson@unavco.org.