

# LSGI Distinguished Lecture Series

## “InSAR for Geohazards Studies”

### Overview

It was our pleasure to invite Prof. Zhong Lu, Shuler-Foscue Professor of Earth Sciences, Southern Methodist University, USA, to deliver a seminar of the LSGI Distinguished Lecture Series on 25 November 2016.



Prof. Zhong Lu's research interests are in the areas of technique developments on 1) Synthetic aperture radar (SAR), interferometric SAR (InSAR), persistent scatterer InSAR (PSInSAR) processing, multi-aperture InSAR (MAI) processing and 3D deformation construction from InSAR and MAI/offset measurements, 2) High-resolution digital elevation model (DEM) generation with InSAR, 3) Land cover characterization with SAR and Landsat imagery, and 4) InSAR deformation mapping with ERS-1, ERS-2, Radarsat-1, JERS-1, SIR-C, SRTM, Envisat, ALOS, TerraSAR-X, TanDEM-X, COSMO-SkyMed satellite SAR imagery.

InSAR deformation mapping is an application research related to volcano deformation mapping, magma supply dynamics from InSAR imagery and numerical modeling, earthquake deformation mapping, seismic slip distribution and fault geometry from InSAR and modeling, land subsidence and infrastructure stability monitoring, ground-water basin analysis with InSAR, underground nuclear explosion monitoring, landslide monitoring with InSAR, mapping mine-induced deformation, mapping water-level changes of wetlands, flood mapping with SAR and Landsat-7 imagery, soil moisture mapping with SAR/InSAR, vegetation characterization with SAR, tidal study with InSAR, glacier dynamics with InSAR, fire scar mapping with SAR and InSAR, arctic ice and water mapping with SAR/InSAR.