



# Advanced Webinar: SAR for Disasters and Hydrological Applications

Tuesday - Thursday, December 3-5, 2019

10:00-12:00 EST (UTC-5)

This training builds on the skills taught from previous ARSET SAR trainings in terms of the use of Google Earth Engine for flood mapping of radar data. This training presents two new topics; the use of InSAR for characterizing landslides and the generation of a digital elevation model (DEM).

## Part One: SAR for Flood Mapping Using Google Earth Engine

This session will focus on the use of Google Earth Engine (GEE) to generate a flood map utilizing SAR images from Sentinel-1. The first part of this session will cover basic principles of radar remote sensing related to flooding. The remaining time in the session will be dedicated to a demonstration on how to use GEE to generate flood extent products with Sentinel-1 and how to integrate socioeconomic data into the flood map to identify areas at risk.

## Part Two: Interferometric SAR for Landslide Risk Assessment

Featuring guest speaker Dr. Eric Fielding, JPL, this session will focus on landslide risk assessment. It will build on InSAR skills from the previous three SAR webinar series. The first part of the session will cover the physics of InSAR as related to landslides. The remainder will be focused on how to generate and interpret a landslide risk assessment product.

## Part Three: Generating a Digital Elevation Model (DEM)

Featuring a guest speaker from Argentina's CONAE, participants will learn how to generate a digital elevation model (DEM) through InSAR techniques. The first part of the session will cover the physics behind using two SAR phase images to generate a DEM. The remainder of the time will focus on how to generate a DEM.



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