



## **Analysis of transient deformation and pre-seismic strain anomalies in SW Taiwan by time series of continuous GPS and PS-InSAR**

Tsai Min-Chien

Central Weather Bureau, Seismological Center, Taipei, Taiwan, R.O.C. (minchyen@scman.cwb.gov.tw)

The high precision Global Navigation Satellite System (GNSS) survey technique provides an efficient tool to study active tectonics and geodynamics. The data of more than 400 cGPS stations are processed with the GAMIT/GLOBK 10.6 software. After strictly data control, time series analysis, noise analysis, and common-mode error correction, we can drive a more realistic interseismic ITRF2008 velocity field Taiwan area. This result not only provides high precision GPS data for all of GPS or other users, also can be a basis for the crustal strain rate estimation and analysis of GPS baseline variation. The 2016 Meinong earthquake is the most deadly earthquake occurred in Taiwan after the 1999 Chichi earthquake. This project will focus on characterizing high strain anomalies and transient deformation from time series analysis of cGPS and PS-INSAR to assess the seismic hazards and potential active structures in the SW Taiwan area in terms of the temporal and spatial strain variations.