

Postdoctoral position in seismology and geodesy at the Institute of Earth Sciences (IES), Academia Sinica, Taipei (Taiwan)



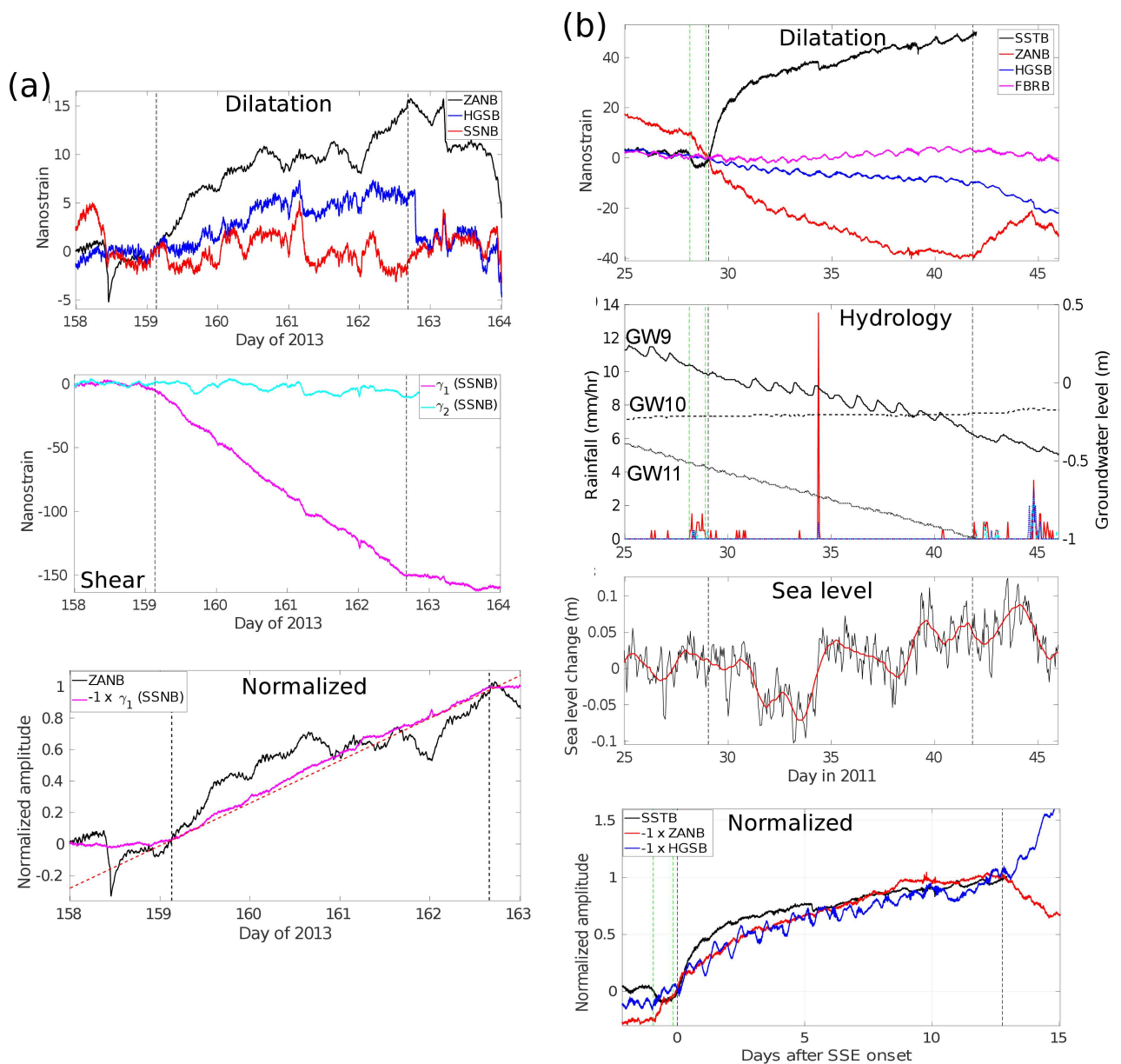
Candidates interested by the position can contact Alexandre Canitano (PI) canitano@earth.sinica.edu.tw or Hsiao-Fan Lin hsiaofan@earth.sinica.edu.tw

- Duration : 2 years (with possible extension of 2 years).

- Requirement : Strong physics/mathematics background and knowledges in signal processing with Matlab/Python (or others) softwares. Enthusiastic about observing and understanding various Earth's phenomena.

In the framework of the project « **Multi-disciplinary observation of the interplay between seismic and aseismic deformation processes in the Longitudinal Valley, Taiwan** », we are looking for a postdoctoral researcher for :

- (1) Processing geodetic (strainmeter, GPS) and hydrological signals to evidence aseismic transient events (e.g., slow slip events (SSE), afterslip) along the Longitudinal Valley faulting
- (2) Processing seismological signals to uncover signatures of aseismic deformation (e.g., low-frequency events, tremors, repeating earthquakes, swarms) and establish possible interactions between geodetic and seismological observations
- (3) Investigate the stress conditions, fault rheology and mechanics of slow fault slip
- (4) Attempt to connect transient slow events to large destructive earthquakes in the region.



Example of detection of SSEs on the Longitudinal Valley fault using borehole strainmeters. (a) Dilatation and shear signals recorded in the Ruisui area associated with a $M_w \sim 4.5$ SSE in 2013. Figure adapted from Canitano et al. (2019). (b) Dilatation signals, hydrological perturbations (groundwater level: black curves, cumulative rainfall: red, blue and magenta bars) and sea level changes during the 2011 $M_w 5.5$ SSE. Normalized strain time-series are signals normalized by the value reached at the end of the SSE episode. Vertical black and green dashed lines indicate the duration of SSE and light rainfall episodes, respectively. Figure adapted from Canitano et al. (2021).