

## PhD position in analog modeling of fault deformations

The University of Strasbourg has 79 research units that encompass all disciplinary fields and is at the nexus of international collaborations. Strasbourg is a pioneer city in terms of respect for the environment, a very pleasant place to live in and at the crossroads of the European economy, along the Rhine axis, in a very dense trading zone between Northern and Southern Europe. The Institut de Physique du Globe de Strasbourg (IPGS), is an Earth Science laboratory, where research is focused around numerous themes in geophysics and geology. The Seismology team investigates earthquake source processes and seismic waves with a particular emphasis on the development of new techniques.

We are looking for a PhD candidate to develop an analog experiment which aims to understand slow deformation of a shear interface. The role of the interface heterogeneity on the deformation and seismic signals will be investigated. Links will then be drawn with faults in natural environments in order to better analyze the seismicity in terms of fault mechanics. The PhD candidate will mainly work with an exciting new experimental setup and should be enthusiastic about an experimental approach. Some knowledge of electronics and computer programming, notably with MATLAB, is favorable. More details can be obtained at:

<http://eost.unistra.fr/recherche/ipgs/si/si-perso/jeanschmittbuhl/proposition-de-these-2015/>

The work to be accomplished during this PhD will be:

- Development of the experimental setup
- Running experiments to investigate the heterogeneity of the deformation field
- Running experiments to characterize the seismic signal associated with different interface properties
- The analysis of earthquake data to draw a link with the experimental results
- Scientific publication and presentation

The PhD position requires:

- Master in geophysics or physics
- Knowledge of English
- Knowledge of computer programming
- Experience with experimental systems will be appreciated

Please send your application including a letter of motivation, a CV, copies of certificates, a list of publications/presentations (if available), and the names and contact information of several referees, preferably in electronic form (compiled in one pdf) to:

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