

4-year Postdoctoral position: Landslides and generated seismic waves: from field observation to inversion and numerical modeling

Institut de Physique du Globe de Paris (IPGP)

The Seismology Group at Institut de Physique du Globe de Paris is pleased to invite applications for the position of a postdoctoral researcher in field observation and modeling of landslides and generated seismic waves, for a period of 4 years. The successful applicant will develop a personal research profile in the field of seismology, geomorphology and natural hazard.

This work is part of a large ERC project SLIDEQUAKES funded by the European Research Council Research (2014-2019). The objective is to take a major step in improving the detection, understanding and prediction of gravitational flows and their modelling at the field scale through measurements of landquakes (landslide generated seismic waves) at the natural scale, analysis and modelling of the source characteristics and of the generated seismic waves.

The applicant will co-lead an ambitious interdisciplinary project involving seismology, geomorphology, mathematical and numerical modelling, and laboratory experiments in collaboration with specialists of these fields in France, in Scotland (University of Edinburgh) and in the USA (CalTech). In particular, she/he will deploy seismometers and laser scanner in the field, develop and apply inverse methods for source characterization, and simulate landquakes on selected natural events. This research will notably benefit from the technical assistance of OVPF (Piton de la Fournaise volcanologic and seismologic Observatory, Réunion Island) and MVO (Montserrat Volcano Observatory) for the seismological data, and Univ. Eichstätt and BRGM for geomorphological data.

The post-doctoral fellow will participate in the research activities of the environmental seismology working group. These activities range from numerical and experimental modeling of granular flows and natural landslides to seismic monitoring of environmental sources (landslides, volcanoes, glaciers, ocean waves, cavities, ...). See <http://www.ipgp.fr/~mangeney/Research.html> for more details.

Institut de Physique du Globe de Paris is a leading research institute in geophysics with specialists in fluid mechanics, seismology (<http://sismo.ipgp.fr/>), volcanology and computational sciences. This highly dynamic setting enables students and researchers to work with up-to-date methods in the different fields in close connection with surrounding laboratories in mechanics and applied mathematics.

Required knowledge and skills: Requirements for the position are a doctoral degree with experience in observational seismology and field measurements. Skills in computing and programming would be appreciated.

Salary and term: Salary is in accordance with French public service rate (about 2600 euros/month). The position is scheduled starting from May 2014.

Application procedure: Applications including curriculum vitae, list of publications, research statement, names and e-mail addresses of two referees should be sent to Professor Anne Mangeney by e-mail mangeney@ipgp.fr. Review of applications will begin in March 2014 and will continue until the position is filled.