Postdoc in Ambient Noise Tomography
The Group of Crustal Deformation and Fluid Flow in the Department of Earth Science at the University of Geneva, Switzerland, has two openings for PhD and PostDoctoral candidates.
To date geothermal energy only provides a small percentage of the world's total energy demand. However, global warming imposes to explore alternative green energies that may replace hydrocarbon-derived resources in the upcoming decades. Recently Switzerland, and in particular the Canton of Geneva, decided to move towards renewable energies. This started a vigorous research effort for the development of geothermal energy in the Great Geneva Basin. In this framework recent geophysical campaigns conducted by SIG (Industrial Services Geneva) acquired deep reflection seismic and gravity data. The PostDoc and the PhD fellows will be working in this framework and will be part of the Crustal Deformation and Fluid Flow group in the Department of Earth and Environmental Science at the University of Geneva. There will be a close collaboration between the University of Geneva, ETH/SED Zurich and SIG in Geneva.

Project Description: A network of about 30 seismic stations will be deployed in the Great Geneva Basin to acquire seismic data for over one year. The main goal of the candidate will be to exploit this dataset to provide more information about the subsurface structure of the region.
Ideally, he/she will:
• Use the acquired seismic data to perform an ambient noise tomography of the Great Geneva Basin;
• Highlight the occurrence of seismic wave velocity anomalies in the region possibly associated to the presence of fluids;
• Monitor the development of shallow exploration boreholes by identifying temporal variations of seismic velocities and/or waveform coherence;
• Highlight preferential fluid migration paths (i.e. fault zones) in the subsurface;

Qualifications: We invite applications from geophysicists, seismologists and physicists interested in the field of passive seismic experiments. We particularly encourage researchers working on ambient noise correlations and joint inversion of geophysical data but broader profiles will also be considered. The candidate should be interested in the areas of geothermal energy development, crustal fluid flow and hydrothermal systems. Demonstrated teaching experience is desirable, but not required. The successful applicant must have a strong publication record in line with his/her academic experience. The candidate must hold a PhD at the time of appointment.

Roles and Responsibilities: The successful candidate is expected to be part of a multidisciplinary team. Participation to other research projects, possibly of large and diverse nature both at national and international level could also be required. Teaching and supervision of graduate MSc and PhD students is also envisaged. The successful candidate is expected to conduct some fieldwork in the Great Geneva Basin and surrounding areas. He/she will be working with Prof. Matteo Lupi, Dr. Anne Obermann, and Dr. Michel Meyer. For questions contact **Prof. Matteo Lupi** (matteo.lupi@unige.ch) and **Dr. Anne Obermann** (anne.obermann@sed.ethz.ch). The application material should include a cover letter, a curriculum vitae, and contact information for three referees. The files should be send by email to matteo.lupi@unige.ch.
The position will remain open until a suitable candidate is found.
Expected starting date: Late 2016.
Duration: 2 years.
Salary: Classe salariale 14/0
Place of work: Group of Crustal Deformation and Fluid Flow, Department of Earth and Environmental Sciences, University of Geneva, Rue des Maraichers 13, 1205 Geneva, Switzerland.
General information: the Section of Earth and environmental sciences (http://www.unige.ch/sciences/terre/) is a vibrant environment. Geneva is an exceptionally international city, surrounded by spectacular geological and natural settings, located at the core of Europe. The University of Geneva is an equal opportunity educator and employer committed to excellence through diversity.