



Ph.D position in Geophysics
Centre de Géosciences
Mines Paristech

The Geophysical team of the Centre de Géosciences at Mines Paristech in Fontainebleau has a position for a Ph.D in geophysics (3 years) for a gifted young student on the subject “Seismic imaging in complex media: the need for a new formulation”

Description:	<p>Full waveform inversion is a general technique to retrieve the Earth properties (P- and S-wave velocities, ...) from seismic measurements at the surface. This method is in principle valid to image complex structures such as salt dome structures, rough interfaces, ... However, one needs to provide an accurate initial velocity model. The global objective of the Ph.D is to reformulate the inverse problem to avoid the dependency with respect to the velocity model. In a second stage, applications will be performed on real data sets.</p> <p>Traditionally, full waveform inversion is either formulated in the time domain (classical wave equation) or in the frequency domain (Helmholtz equation). The curvelet domain offers some advantages to solve the inverse problem. This should be investigated in more details. Curvelet is a generalisation of wavelets to two- and three- dimensional spaces.</p> <p>The geophysical team at Mines Paristech has experience both on full waveform inversion and on curvelets.</p>
Profile:	<p>The candidate must have a research master degree before September 2009, with a strong background in at least one of the following fields: physics, applied mathematics or geophysics. The candidate should also have experience in programming languages such as C, Fortran, etc. Good knowledge of English is essential.</p>
Salary:	<p>Around 1400 euros per month (net salary)</p>
Location:	<p>Centre de Géosciences, Mines Paristech, Fontainebleau (77300 – France), 65 km South of Paris.</p>
Deadline:	<p>Deadline for application: July, 1st, 2009 Duration: 3 years, starting from September 2009</p>
To apply:	<p>Please send a resume and a motivation letter to: Hervé Chauris, Ecole des Mines de Paris, 35 rue Saint-Honoré, 77300 Fontainebleau, France E-mail: herve.chauris@mines-paristech.fr Tel: +33 1 64 69 49 13 Fax: +33 1 64 69 49 35 More information at http://www.geophy.ensmp.fr Please quote reference: 09/fullwaveform</p>