



The [Earth and Planetary Materials group the Unité Matériaux et Transformations](#), at the [Université de Lille](#), France, in collaboration with the [Institute for Geophysics](#) at the [University of Münster](#) invites applications for a position as

**Post-Doctoral Fellow
from the fall of 2019**

The fixed-term position is available for 1 year (extendable), and paid according to French standards for post-doctoral fellowships, including all associated social benefits.

The post-doctoral fellow will be part of the ANR-DFG French-German bilateral project, [TiMEleSS: Phase Transformations, MicrostructurEs, and their Seismic Signals from the Earth's mantle](#). The candidate will join a group of mineral physicists and seismologists in France and Germany, and is expected to work in close collaboration with PhD students within the network. The project is funded by the ANR in France and the DFG in Germany.

The overall goal of TIMEleSS is to investigate the link between microstructures, phase transitions and seismic structures in the deep Earth mantle using a combination of mineral physics experiments and seismic observations. The post-doctoral fellow will be in charge of connecting mineral physics knowledge of phase transformations and microstructures in the Earth's mantle to potential observations of seismic reflections and scattering. The work will be based on the knowledge of elastic properties of minerals from the literature, simulations of polycrystal microstructures based on input from experiment, as well as simulations of wave propagation and reflections through complex microstructures induced by phase transformation and deformation, with the aim of interpreting seismic observables.

The project is based and funded at the University of Lille, France (PI [Sébastien Merkel](#)). The selected candidate will work in close collaboration with the University of Münster, Germany (PI [Christine Thomas](#)), for the modeling of wave propagation and seismic observations.

Prerequisites:

We seek a highly motivated individual with keen interest in deep Earth processes, seismology, and mineral physics. The ability to work independently is essential to the project. The candidates should have a strong background in deep Earth seismology and/or wave propagation in complex media and/or mineral physics. Experience in wave propagation and/or microstructure modeling is highly desirable. Good command of English (written and spoken), computational skills and availability to travel are required. Applicants should hold a PhD degree or equivalent in Earth Sciences, Physics, Materials Science, or a related field at the time of the appointment.

Applications:

Candidates should submit, in a single pdf file, a short statement of research experience and interests, a CV including a list of scientific productions, and the names and contact information of two or three potential referees **by August 25th 2019** to Prof. Dr. Sébastien Merkel (sebastien.merkel@univ-lille.fr). Review of applications will start in August and will continue until the position is filled. The position is expected to start in the fall of 2019.

Please contact Prof. Dr. Sébastien Merkel for additional information concerning the project. General information about the TIMEleSS project and ongoing work is available at the project's homepage at <http://timeless.texture.rocks/>.