# Geophysical data analysis

**Context of the research activity**

Geophysical data analysis through direct data transformation and rescaling process. Geophysical methods find application on many exploration and monitoring problems. Most methods require the solution of an inverse problem to estimate model parameters but recent studies focused on the estimation of data transformation function that can be used to directly transform the data into model through a rescaling process. These approaches are of great interest in the view of real time data interpretation and monitoring.

**Objectives**

The main research objectives of this PhD thesis include (not necessarily all):

- Theoretical description of data transformation functions for different geophysical methods (seismic, EM, potential fields).
- Design and implementation of processing workflows for the application of data transformations.
- Study of the Integration of data transformations for different geophysical methods

**Skills and competencies for the development of the activity**

Candidates should have a solid background in geophysics, and attitude and motivation to learn through advanced research. Coding skills, and expertise in signal processing and statistical analysis are preferred.