**Postdoctoral research position**

The RING team (http://ring.georessources.univ-lorraine.fr) is seeking a postdoctoral researcher to work on **potential field response on realistic and uncertain geological models**. This work will be carried out in the frame of the DONUTS project, dedicated to geophysical interpretation and processing of geophysical data for geothermal and underground energy storage applications (***Développement d’Outils Numériques de Traitement et d’interprétation des Signaux géophysiques pour les reservoirs*)**. The position is available for 6 month, starting as soon as possible, with a possible extension to a full year or more.

**Research project**

The goal of the project is to benchmark different computational codes to compute the potential field response on realistic geomodels. In particular, the goal will be to implement direct computation of gravity fields on unstructured meshes and level sets representing geological structures. Sensitivity analysis will be performed to compare the accuracy of different numerical schemes and parameterization. These codes will then be used to understand the impact of geometrical uncertainty of geological objects at multiple scales onto the geophysical response, possibly with the help of machine learning.

**Requirements**

The candidates must have a PhD degree in geomodeling or geophysics, and a good command of computational and numerical methods. A good mastery of C++ is preferred, as the developed codes will interact with existing C++ libraries (RINGMesh, Gocad). The candidates are also expected to have good communication (both oral and written) and interpersonal skills for collaborative work with geologists, geomodelers and geophysicists. Knowledge of machine learning methods would be a plus.

**Application**

To apply for the position, please send to Prof. Guillaume Caumon (Guillaume.Caumon@univ-lorraine.fr) and Sophie Romain (Sophie.Romain@univ-lorraine.fr):

* A cover letter stating your background and research interests.
* A full CV including publication list.
* Contact information for two referees.