

## Postdoctoral position at the University of Rennes

### “Characterizing bio-remediation in subsurface porous media by joint optical measurements and spectral induced polarization”

We offer a **two-year postdoctoral fellowship** within the [IMAGE](#) project, funded by the French National Research Agency (ANR), in collaboration with the French Geological Survey (BRGM) and Sorbonne University (SU)

**Host institution:** Department of Geosciences (GR), University of Rennes

**Supervision:** Yves Méheust (GR)

**Collaboration:** Philippe Leroy (BRGM), Tanguy Le Borgne (GR), Sylvie Collin (SU), Hervé Tabuteau (Physics Institute of Rennes)

#### Project description:

The project addresses biodegradation of a hydrocarbon inside a porous medium, using analog experiments in model porous media (millifluidics and microfluidics). The aim of the project is dual: to characterize the reactive transport processes at play during biodegradation using optical measurements, and to perform spectral induced polarization (SIP) measurements in order to infer how the SIP signal is correlated to the biodegradation process.

The project will be supported by colleagues at BRGM (SIP measurements) and University Paris Sorbonne (microbiology).

#### Applicant profile:

We welcome applicants with a PhD in engineering or natural sciences (earth sciences or physics). Experience with table-top flow experiments is required; experience with micromodel and/or microfluidics experiments would be a big advantage. Good knowledge of fluid mechanics and transport processes, as well as some experience with the use of Matlab or Python to treat data, will be appreciated. It is expected that the postdoctoral fellow closely cooperates with the aforementioned colleagues and possibly others, so the ability for interdisciplinary work and good organisational skills are required.

#### Work conditions:

We offer a highly motivating environment within team [TERA](#) of GR, and all the necessary equipment and lab space, as well as a comfortable salary depending on the fellow's experience, including social security benefits according to the French laws. The city of Rennes is renowned in France and Europe for its quality of life.

The University of Rennes advocates gender equality. Women are therefore strongly encouraged to apply. The work language will be either French or English, depending on the PhD student's preferred language.

#### Contact:

Application should be addressed electronically to Prof. Yves Méheust ([yves.meheust@univ-rennes.fr](mailto:yves.meheust@univ-rennes.fr)) and Dr. Philippe Leroy ([p.leroy@brgm.fr](mailto:p.leroy@brgm.fr)). The application should include, besides a CV and a publication list, a short statement of motivation. The announcement will remain open until the position is filled.