Postdoctoral associate in Critical Zone geochemistry

Job offer from the institut de physique du globe de Paris | UMR 7154

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<tr>
<th>Researcher in</th>
<th>Geochemistry, Hydrology</th>
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<td>Duration</td>
<td>2 years</td>
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<td>Affectation</td>
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<td>Salary</td>
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<td>Date of publication</td>
<td>25/01/2021</td>
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<td>Starting date</td>
<td>01/05/2021</td>
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<td>Location</td>
<td>(address) 1, rue Jussieu 75005 Paris</td>
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L’institut de physique du globe de Paris

A world-renowned geosciences organisation, the IPGP is associated with the CNRS and an integrated institute of the new Université de Paris. Bringing together more than 500 people, the IPGP studies the Earth and the planets from the core to the most superficial fluid envelopes, through observation, experimentation and modelling.

The research areas are structured through 4 main unifying themes: Interiors of the Earth and Planets, Natural Hazards, Earth System and Origins.

The IPGP is in charge of observation services in volcanology, seismology, magnetism, gravimetry and erosion. And the IPGP's permanent observatories monitor the four active French overseas volcanoes in Guadeloupe, Martinique, Réunion Island and Mayotte.

The IPGP hosts powerful computing resources and state-of-the-art experimental and analytical facilities and benefits from first-class technical support. The IPGP provides its students with geosciences training that combine observation, quantitative analysis and modelling, and that reflects the quality, richness and thematic diversity of the research conducted by the IPGP teams.

Team/Department

Research Team: Géochimie des Enveloppes Externes – Geochemistry of External Envelopes
Project: ANR-funded project under the Make Our Planet Great Again program

More information on the CZTOP project is at https://sites.coecis.cornell.edu/cztopproject/
Missions

The ANR research project “CZ-TOP” seeks to integrate stable isotope tracers with reactive transport and non-steady state hydrologic modeling to gain an improved understanding of the processes that control concentration-discharge relationships in watersheds. The project will have positions available for two post-doctoral scholars. We seek individuals with interests in developing new collaborative approaches in non-traditional isotope geochemistry, reactive transport modeling, and non-steady state hydrologic modeling in the Critical Zone.

Activities

- Sample collection, preparation and analysis of water, sediment and soil samples for geochemical and isotopic characterization. Refinement of techniques for isotopic time series measurements. Incorporation of geochemical and isotopic data into reaction models for Critical Zone processes
- Application and development of non-steady state hydrologic models to experimental watersheds, and integration with hydrochemical data
- Integration of sampling design and data with hydrologic data and models.

Expected Skills

1. Ph.D. in geochemistry, geochemical clean laboratory experience
2. Ph.D. in hydrology, hydrologic modeling experience
- Experience with data analysis, ability to work with geochemical and/or hydrologic models.
- Ability and strong interest in working in a highly interdisciplinary atmosphere.

Obligations and risks

Work will be based at IPGP, Paris. Projects will also include field work within France, potentially including Départements et territoires d’outre-mer. Field work sites may include international sites in Europe or elsewhere. Laboratory work includes exposure to potentially corrosive substances and must follow approved geochemistry laboratory protocols.
Participation in relevant international science conferences, virtually or in person. All work must follow approved safety protocols of IPGP.

How to apply

The application should include a CV and cover letter emailed to derry@cornell.edu

References: please provide contact information for two persons who can evaluate your scientific abilities and suitability for the position.