

Post-doctoral Research Position

Upscaling CO₂ Injection in a Heterogeneous Geological Reservoir.

The Climate and Environment Sciences Laboratory invites applications for a Fluid Mechanics post-doctoral position to conduct theoretical and numerical researches on the upscaling of CO₂ flow in a heterogeneous geological reservoir. This project is part of a collaborative program called H-CUBE (Hydrodynamics, Heterogeneity and Homogenization in modeling of CO₂ storage into saline aquifer, <http://anr-h-cube.brgm.fr>) conducted jointly with BRGM (French Geological Survey), CEREGE (Research Centre on Geosciences for Environment) and Terra 3E, a young innovative company in reservoir engineering services. The overall objective of H-CUBE is to assess the impact of geological heterogeneities on sequestration properties of a reservoir. The aim of the proposed position is to study the macro scale compartment of a CO₂ plume in a heterogeneous porous media. One of the main issues to be addressed is: Does dispersion exist when gravity is present? This research will be based both on numerical simulation and theoretical developments (homogenization of periodic media and/or stochastic modelling of random media).

The candidate is expected to have a PhD in the field of Fluid Mechanics (Porous Media), Hydrogeology or Petroleum Engineering, and good theoretical and numerical skills. Some experience in reservoir modelling would be a plus.

This fellowship is available for duration of 24 months and is funded by the French National Research Agency. The work will take place at the LSCE located at Gif-sur-Yvette (91) near Paris.

Applicants should send a letter of intent and resume via E-mail.

Person to contact :

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