

PhD position

Experimental and numerical study on the hydro-mechanical behavior of compacted expansive clay

Laboratory: Laboratoire Navier (<http://navier.enpc.fr>)

University: Ecole des Ponts ParisTech (<http://www.enpc.fr/en>)

Supervision: Anh Minh TANG, Jean-Michel Pereira, Patrick Dangla, Jean-Noël Roux

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Starting date: October 2016

Funding duration: 3 years

The study aims at investigating the hydro-mechanical behavior of compacted expansive clay as engineered barrier for high-level radioactive waste disposal. First, infiltration experiments will be performed in laboratory to observe the migration of moisture through a soil specimen at constant-volume conditions. Stress development during the moisture infiltration will be monitored. Second, numerical simulations (using finite elements and discrete elements methods) will be performed to simulate the hydro-mechanical behavior observed from the experiments. Finally, numerical simulations will be performed to simulate full-scale experiments that have been already started.

The candidate should have (or be preparing) a Master's degree in Civil Engineering, Geomechanics, or related fields. Good skills and experiences in numerical simulations are required. Good level in English is mandatory and good level in French is appreciated.

For the administrative reasons, the candidate should be less than 26 years old on 1st of October 2016 and be EU citizen.

The candidate should send the application (CV, letter of motivation, letter of recommendation) by email **by 15th of March 2016**.