



PhD Position

Title	Experimental study on the mechanical behavior of gas hydrate bearing sediments
Laboratory	Laboratoire Navier (http://navier.enpc.fr)
University	Ecole des Ponts ParisTech, Université Paris-Est
Starting date	October 2016
Funding	Project HYDRE (ANR-15-CE06-0008), for 3 years
Supervision	Anh Minh TANG, Michel Bornert, Stéphane Rodts, Patrick Aimeidieu

Job description

Gas hydrate is a crystalline clathrate composed of a gas molecule encaged in a lattice of hydrogen-bonded water molecules. The natural gas component of gas hydrates is typically dominated by methane. The origin of the methane in a natural hydrate can be either thermo-genic or biogenic gas. Methane hydrate forms naturally in regions of permafrost and continental margin sediments in the presence of a sufficient quantity of methane gas under appropriate pressure/temperature conditions. The quantity of natural gas in sedimentary gas hydrates greatly exceeds the conventional natural gas resources. While this makes methane hydrates attractive as a potential energy resource, their destabilization upon changes in pressure/temperature conditions is considered as a geo-hazard for slope stability and a source of significant greenhouse gas.

The successful candidate will be appointed to work as a doctoral researcher in the Laboratoire Navier on the research project HYDRE (funded by the French Research Agency, ANR) entitled "Mechanical behavior of gas hydrate bearing sediments". The candidate's research will focus on the experimental studies including mechanical characterization by temperature-controlled high-pressure triaxial tests and observations using X-ray micro-tomography and Magnetic Resonance Imaging (MRI).

Candidate's profile

- A Master's degree in civil engineering, geotechnical engineering, geosciences or related fields.
- Experience, interest and good skill in laboratory activities
- Good level in English is mandatory and good level in French is appreciated.

Application documents

- Letter of motivation
- CV
- Letters of recommendation

Please submit your application by email before 30th of March 2016.

Contact

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