

Job Title	Researcher in Fracture Mechanics
Discipline	cf. le thésaurus des disciplines et spécialités
Specialty areas	Geophysics/Geomechanics
Contract type	Permanent position, full-time contract
Department/Office :	Department of deep-sea physical resources and ecosystems (REM° Marine Geoscience research Unit (REM)
Duty station :	Centre Bretagne, Brest
Application deadline	April, 04, 2016

Reference (HRD):

The Institute and the recruiting department

French Research Institute for Exploitation of the Sea, Ifremer, through its research work and expert advice, contributes to knowledge of the oceans and their resources, to monitoring of marine and coastal environments and to the sustainable development of marine activities. To these ends, Ifremer conceives and operates tools for observation, experimentation and monitoring, and manage the oceanographic databases.

Created in 1984, Ifremer is a French public institute of an industrial and commercial nature. It is supervised jointly by the Ministry of Higher Education and Research and the Ministry of Ecology, Sustainable Development and Energy.

Ifremer undertakes research missions, offers expert advice and acts as a funding agency.

Ifremer performs targeted applied research to address the questions posed by society (climate change effects, marine biodiversity, pollution prevention, seafood quality etc.). Results include scientific knowledge, technological innovations, and systems for ocean observation and exploration. Partnerships may be public, private or a combination of the two.

Ifremer works in a network with the French scientific community, also collaborating with international partner organizations, in the frame of several national and international projects, including contractual activities.

The «Marine Geosciences» (GM) Research Unit at Ifremer is one of the oldest of the institute. Since its creation, GM has improved its performances in fundamental and applied scientific research at an international level in nearly all domains of marine geosciences. The Laboratory of "Sediment Dynamics and Geohazards" (LAD), is one of the 3 research laboratories of GM. LAD is a multidisciplinary laboratory which conducts applied and fundamental research in the fields of geotechnics, geophysics (including seismology), geology and sedimentology in order to characterize the intensity, the distribution in time and space of marine geological hazards and their association to a variety of external key factors (earthquakes, fluid migration, gas hydrates...).

General areas of responsibility (principal missions)

In recent years, LAD has led research on geohazards by initiating theoretical, technical and methodological development. These developments were often made by decoupling deep geological processes from the more shallow ones. The LAD laboratory aims to develop an integrated approach, coupling surface processes (in relation to fluid circulation, sediment deformation, near-surface creeping, etc) and deep processes (fault rupture, deep crustal creeping, etc) using field observations, laboratory experiments and numerical modelling techniques.

The successful candidate will be working in the LAD laboratory and will develop numerical modelling techniques in the domain of fracture mechanics. He/she will analyze the interactions between deep mechanical processes and shallow sedimentary deformations.

Principal activities

He/She

- will develop theoretical methods necessary for the understanding of the relationship between mechanical loading, fluid migration, thermicity and seismicity in the marine environment.
- will conduct theoretical and numerical analysis of rock fracture analysis and will compare theoretical data with observations and laboratory experiments.
- will have completed a Ph. D. in the field of rock mechanics and will have detailed knowledge in the field of seismology.
- will work on the optimization of new instruments (seismometers, deep towed seismics) as well as existing ones (penetrometer, piezometer).

Collaborative work environment

The position requires close collaboration with researchers in the field of geology and sedimentology from the other laboratories of the "Marine Geoscience" Research unit as well as researchers from the technical research units at Ifremer.

The successful candidate will deepen and develop national and international collaborations with research institutes as well as with industrial partners.

Required knowledge, skills, and characteristics

- Knowledge, skills, and abilities:
 - Rock mechanics
 - Numerical modelling in fracture mechanics
 - Fluid flows in porous media
- Human qualities:
 - Excellent English language skills
 - Proven capability to present and publish research results
 - Capability to work in a multi-disciplinary team
 - Strong motivation to exchange with specialists from other fields
 - Capacity of work at sea

Required education and experience

PhD in fracture mechanics and/or structural geology with strong analytical and numerical skills.

Professional experience (post-doctoral or industrial) appreciated

Specific working conditions

Sea expeditions

Full-time

Sourcing solutions

The English version of this offer will be posted in the English version of our website, in Euraxess, and some social Networking sites (ex: LinkedIn, twitter), if you need HR assistance in other kinds of sourcing solutions, please contact us.

How to apply for this position

Deadline for applications: April 4, 2016

Go to this offer in one click (HRD):

All applications are processed exclusively via our website. For more information about this position, please email us at grh@ifremer.fr (or the recruiter manager's email address if it is possible?)

Our job offers on the website /Ifremer careers /[Jobs and Internships](#), or [Offres d'emploi/stage](#) (French version)

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