

Assistant Professorship, University of Orléans, France. 1st Sept. 2018

Extraction / Storage of energy in geological formations

The offered position (<http://www.isto-orleans.fr/liste-des-annonces/maitre-de-conferences-section-35/>) is a university assistant/associate professorship (Maître de Conférences in French nomenclature), in the section 35 of CNU (French University Council, <http://www.cpcnu.fr/web/section-35>). Annual teaching duties amount to 192h, possibly with both classroom and field periods (depending on expertise). The position requires excellence in teaching and mentoring/tutoring, professional and scholarly achievements, and a commitment to service to the University. It is expected that the successful candidate will develop and maintain a vigorous, externally funded research program. Dead-line:

Job description

We seek applicants in the field of Earth sciences for energy, who will help us move forward into the frontier and exciting areas of the energy, numerics, rocks nexus.

One anticipated area of specialization covers numerical imaging of underground, georeferenced mapping, geostatistics targeting at predictivity (environmental risk assessment, favourability maps), at the scale of large sedimentary basins and/or complex and heterogeneous aquifers. Another area is about geothermal energy and processes, including the structure and petrophysics of the reservoirs, the geometry of basins (lithologies, fault zones, petrophysical properties, etc). A third area revolves around the coupled hydro-mechanical and/or thermal-hydro-mechanical modelling, ultimately to reach the fully coupled THMC modeling, combining numerical and experimental approaches. Advanced skills in conceptual and numerical modelling, expertise to carry out physico-geochemical experiments, in order to validate the processes controlling the extractable resources or the storable volume for various vectors (CO₂, compressed air, etc), are a significant plus. Scientists with strong backgrounds in applied Earth Sciences at all scales (cap rocks and reservoirs, geothermal exchangers, wells integrity, etc), and/or with academic, national laboratory, industry backgrounds, are encouraged to apply.

Regardless of research focus area, enthusiasm for interdisciplinary research and cultivation of new collaborations is essential to this position. The successful candidate must be comfortable teaching our undergraduate core curriculum classes in GIS, sedimentology, geophysics, as well as basics in physics, chemistry, mathematics (according to background). He/she will participate in various graduate courses, as geothermal resources, geostatistics, numerical imaging, etc.

Information about the institution

The Earth Sciences institute of Orléans (ISTO) is a joint research unit between University of Orléans, CNRS and BRGM, with 150 people, with about seventy University professors or CNRS and BRGM researchers, around twenty technicians and administrative support staff, about ten post-docs and fifty PhDs. Research is carried out within five main domains (Biogeosystems; Porous media; Metallogeny; Géodynamics; Magma). ISTO holds various analytical and experimental facilities (<http://www.isto-orleans.fr/>), and a privileged access to a computing mesocenter (<http://cascimodot.fdpoisson.fr/ccsc>).

The foreseen research will benefit from two national-based funded structures: LabEx VOLTAIRE to fund research on transport and reactivity of fluids from the deep crust to the atmosphere; EquipEx PLANEX, a spectroscopic platform for *in situ* analysis of solids and fluids over a large P-T range.

Practical and contact information

Applicants should submit a cover letter, curriculum vitae, a statement of research and teaching interests and contact information for three references. Qualification to the advertised position must be demonstrated either through a national-based assessment carried out by CNU ("Qualification aux fonctions de Maître de Conférences") or by recent certification from the current employer.

Inquiries regarding this position may be addressed to:

Lionel Mercury, director of ISTO (lionel.mercury@univ-orleans.fr).

Deadline for application: March 15th, 2018.