Recruitment of a full-time permanent scientific position in hydrogeophysics

**Starting date:** 1st September 2021

**Job description:**

A position of **full-time Research Logistician**, in the field of hydrogeophysics within the Research Unit "Urban & Environmental Engineering" of the Faculty of Applied Sciences of the University of Liege.

The Research Unit "Urban & Environmental Engineering" (UR UEE, www.uee.uliege.be), associated with the Research Units SPHERES and GEOLOGY of the Faculty of Sciences and the Research Unit TERRA of the Faculty Gembloux Agro-Bio Tech, is looking for a Research Logistician for the management and development of the Hydrogeophysics platform.

The research activities carried out within these RUs in the field of Hydrogeophysics aim at developing field and laboratory measurement methods in order to collect innovative observation data of different systems where water plays an important role such as groundwater exploitation, flows between surface water and groundwater, water-soil-plant systems, mass movements and natural hazards, or soil contamination. In addition to the characterization of these systems and their dynamic monitoring, the objectives of hydrogeophysical data are to better understand the processes occurring in these systems, to anticipate their development, and to improve the models and theories related to them as well as the scientific predictions derived from them.

These research activities require the design of on-site or in laboratory experiments based on the operation or development of advanced equipment, associated scientific softwares and experimental sites. This allows to feed theories and models and thus to develop new methods (technological development) to better understand and predict the underground processes under study (scientific advancement).

In parallel with these research activities, the laboratories benefiting from the hydrogeophysics platform develop teaching activities and supervise work by students in the above-mentioned fields. These teaching activities are largely based on experimental practical work.

The platform currently has the following remarkable equipment for teaching and research activities:

**Main equipment:**

- Tomography of electrical resistivity, spontaneous potential and induced polarization;
- Surface nuclear magnetic resonance;
- High and low frequency geo-radar;
- Fluxgate magnetometer;
- DAQLINK seismic acquisition 48 traces and 1D geophones + 16 3D geophones;
- Seismological stations;
- Electromagnetic CMD mini-explorer FDEM;
- Fiber optics distributed temperature sensing (AP sensing);
- DGPS Stations.
Additional equipment:
- CTD, Diver, MiniTrioll;
- Drones;
- Laserscanning;
- TDR probes, multiplexer;
- Data logger;
- Pumps, multi-level sampler;
- Current meter.

In addition to the sites studied during research projects, the research activities benefit from access to equipped sites:
- Hermalle-Sous-Argenteau (alluvial aquifer);
- Colonster (alluvial aquifer);
- Euregio Pilot Site for the Einstein Telescope;
- Experimental fields of AgricultureIsLife;
- Ecotrons of Gembloux AgroBio-Tech.

Role:

- **Platform management activities**
  - Centralize and disseminate information about the platform's equipment and associated software;
  - Platform management: investment in equipment, depreciation of equipment, maintenance and acquisition of equipment and associated consumables, including modes of transport and acquisition of equipment;
  - Administrative management of the platform (reservation center, user guide).

- **Research support activities**
  - Participation in the setting up of research projects through programs such as Horizon Europe, Interreg, the FNRS, the Walloon Region.
  - Execution of research projects and accompaniment of PhDs:
    - The design of measurement campaigns and data collection, including for the temporal monitoring of systems, accompanying researchers on site for the taking of measurements (logistics, knowledge of systems and associated risks, quality approach, transport and collection by private vehicle (drone, quad...)),
    - Data management from measurement to their integration in a database,
    - Adequate data processing, inverse problem solving in order to model the system under study.

- **Teaching support activities**
  - Management of field activities within the framework of teaching in the Faculty of Applied Sciences, Sciences and Gembloux Agro-Bio Tech;
  - Participation in activities for the promotion and dissemination of Science and Technology to the general public: open days, student fairs, school days, etc.
Candidate profile:

- The candidate holds a PhD in a field related to the above missions;
- The candidate has extensive research experience in Hydrogeophysics;
- The candidate demonstrates expertise in hydrogeophysical measurements and in the programming/handling of open-source software associated with the field of research;
- International experience is an advantage;
- French proficiency is expected after 3 years;
- Ability to work in a team environment.

Applications

Candidates are requested to send their application to Postesscientifiques@uliege.be with copy to Professor Eric J.M. Delhez, Dean of the Faculty of Applied Sciences, by e-mail to doyen.fsa@uliege.be by the 1st of May 2021 at the latest.

In order to be eligible, all applications will include:

- A complete curriculum vitae;
- A copy or an attestation of the PhD diploma;
- A letter of motivation;
- Two letters of recommendation;
- A document detailing the skills and experience of the candidate in relation to the missions that will be entrusted to him or her and his or her scientific project for the development of the platform’s equipment.

Conditions of employment

The position will be awarded either immediately with a permanent appointment or for a fixed term of four years, which may lead to a permanent appointment after evaluation no later than the end of the third year.

Our institutional policy is based on diversity and equal opportunities. We select candidates on the basis of their qualifications regardless of age, sexual orientation, gender, age, origin, beliefs, disability or nationality.

Further information:

Additional information can be obtained from Prof. Frédéric NGUYEN, Director of the Urban & Environmental Engineering Research Unit --F.Nguyen@uliege.be

Remuneration:

Remuneration scales and how they are applied are available from the University’s Human Resources department: Mrs Ludvine DEPAS – +32 4 366 52 04 – Ludvine.Degas@uliege.be