

FULL-TIME ACADEMIC POSITION IN GEOTECHNICAL ENGINEERING (M/F)

BRUSSELS SCHOOL OF ENGINEERING

Reference: 2022/A009

Application deadline: 10/01/2022

Start date: 01/10/2022

Job description

The School of Engineering (EPB) of the Université Libre de Bruxelles (ULB) offers a full-time academic position in **Geotechnical Engineering**.

1. Context

Increasing urbanization associated with the rapid development of renewable energy require innovative geotechnical solutions for a sustainable use of the subsurface. This context raises new challenges, calling for cutting-edge research in the field of geotechnical engineering.

The successful applicant (M/F) will develop research and education in the domain of geotechnical engineering, in the widest sense.

2. Area of Research

Research activities aiming at the development of novel experimental techniques and strategies, or cutting-edge numerical tools applied to geotechnical engineering are expected. Research areas of interest include, but are not limited to:

- Geotechnical engineering under climatic changes
- Offshore geotechnics
- Experimental soil mechanics
- Data assimilation and machine-learning applied to geotechnical engineering
- Monitoring of geotechnical infrastructures
- Image-based analysis applied to geotechnical engineering
- Geomechanics associated with the production/storage of energy

The successful applicant will benefit from existing research and experimental equipment of the Laboratory of GeoMechanics (LGM) at BATir (Building, Architecture and Town Planning) department, which could be enriched by their own expertise. The laboratory is able to conduct soil identification tests, as well as triaxial, oedometer, and direct shear tests, with specific additional equipment for testing of unsaturated soils and indurated, cemented or stabilized soils.

3. Educational and scientific goals

The successful applicant is expected to have demonstrated a strong research interest, and to have developed expertise in the field of geotechnics or geomechanics. They will develop research in the domain of Geotechnical Engineering within the Laboratory of GeoMechanics (LGM) at BATir department (<http://batir.ulb.ac.be/>), leading to a scientific output of international level. The successful applicant is expected to initiate their own research programs leading to the development and funding of a research team.

Collaborations with other faculty members of the BATir department and of the Brussels School of Engineering (Ecole Polytechnique) leading to joint research initiatives will be expected. In particular, teamwork with colleagues in the fields of Engineering Geology, non-linear Mechanics of Structures and Materials, Robustness, Structural health monitoring of civil infrastructure, Cement and Concrete material engineering can be considered.

They will be invited to apply for grants from regional, national and international levels enabling to develop their research, with the help of the ULB Research Department. Any proven experience regarding project definition and grant writing will be considered as an asset. A background in managing research projects as well as industrial collaborations would be also an asset.

The teaching responsibilities of the prospective candidate will encompass various types of activities, including lectures, tutorials and project-based learning at the Bachelor and Master's level in the Brussels School of Engineering (Ecole Polytechnique de Bruxelles). Proven teaching skills with experience in teaching in English and in French will be considered as an asset.

The successful applicant will be involved in academic related support activities, among which an involvement in the academic management at the level of the course program, Department, Faculty or University, and a contribution to Community / Societal service and student recruitment activities of the School.

4. Teaching workload

In the first three years, the appointed academic will take the responsibility of the following existing courses of the BSc and [BRUFACE](#) MSc programmes in Civil and Architectural Engineering:

- Soil mechanics – 5 ECTS (followed by 3rd year BSc students in Civil and Architectural Engineering, in English)
- Geotechnical engineering – 5 ECTS (followed by MSc Civil Engineering students in the BRUFACE program, in English)
- Projet de conception des structures – 5 ECTS (partim of 2 ECTS for geotechnical aspects) (followed by 3rd year BSc students in civil and architectural engineering, in French)

The candidate will also be asked to participate to additional teaching activities such as student projects at the BSc and MSc levels, as well as MSc thesis supervision.

The teaching workload may evolve gradually.

Qualifications required :

PhD Degree (with doctoral thesis) in Engineering

Skills required

- Applicants (M/F) should have at least 4 years of research experience at the time of their recruitment.
- A post-doctoral experience and an excellent scientific record relative to seniority are a plus.
- Exchange periods outside of the applicants' home institution (during or after their PhD) will be taken into consideration when evaluating applications.
- Ability to develop experimental research activities will be considered as an asset.

- Applicants who do not speak French (level C1) may be granted a period of adaptation, but they must be able to teach in French at the end of the third year following their appointment.
- Level C1 in English is expected. Candidates must be capable of teaching in English at the time of their appointment.

Interested ?

For more information, please contact Prof. Philippe BOUILLARD (phone: +32 2 650.27.56 – E-mail: philippe.bouillard@ulb.be).

Applications must be sent by e-mail to the rectorate of the Université Libre de Bruxelles (rectrice@ulb.be) and to the faculty deanship (le-doyen-polytech@ulb.be).

They must include the following :

- an application letter ;
- a Curriculum vitae including a list of publications :
if you want you can complete a standard form via our website at <https://www.ulb.be/fr/documents-officiels/completer-votre-cv-en-ligne>. Once completed, it must be downloaded and attached to the application file.
- a 7,000-character report (4 pages) presenting the applicant's research activities and a research project, including how these will integrate into ULB's research teams ;
- a teaching dossier including a 7,000-character report (4 pages) on the applicant's previous teaching activities and a teaching project for the first five years in this position; these must be relevant to the faculty and to the teaching profiles for the programmes to which the applicant is to contribute ;
- a note on the applicant's international achievements and projects (no more than 4 pages) ;
- the names and e-mail addresses of five referees (respecting the gender balance) who may be contacted by those in charge of evaluating applications. These referees should not have conflicts of interest because of family or emotional ties.

The appointment to the academic staff of ULB is made at "Chargé de cours" level. As of their appointment, members of academic staff are authorised to use the honorary title of "Professeur".

Equal opportunities policy

ULB's personnel management policy is geared towards diversity and equal opportunities.

We recruit candidates on the basis of their skills, irrespective of age, gender, sexual orientation, origin, nationality, beliefs, disability, etc.

Would you like to be provided with reasonable accommodation in the selection procedure because of a disability, disorder, or illness? Please contact Marie Botty, the person in charge of diversity aspects for the academic and scientific staff (marie.botty@ulb.be). Be assured of the confidentiality of this information.

More details on the ULB gender and diversity policy are available at <https://www.ulb.be/en/about-ulb/gender-equality-at-ulb>.

The Brussels School of Engineering is active member of the European project [CALIPER](#), aiming at gender equality in STEM disciplines (Science, Technology, Engineering and Mathematics). As such, the faculty implements a Gender Equality Plan to boost female researcher's role in STEM field. Both genders will be represented in the selection committee.

You will find all the regulations relating to academic careers on our site at <http://www.ulb.ac.be/emploi/academique.html>.