

Permanent (full-time) scientific vacancy in the field of “Environmental evaluation in bioengineering”.

**Start date:** 01/10/2022

**Vacancy reference:** GxABT-211215-01

### [Job description](#)

**A position of first assistant**, in the field of **Environmental evaluation in bioengineering**, attached to the **Gembloux Agro-Bio Tech** Faculty (single department).

Our society is embarking on an environmental transition that should aim to reduce or compensate for the damage caused by anthropogenic pressures (climate change, pollution and scarcity of resources). This will involve the development of new production routes and processes that have been proven to minimise their environmental footprint through quantified assessment. Bioengineers have a role to play in this transition process as highlighted in the conclusions of our forward-looking workshops dedicated to the challenges facing bioengineers in 2030. This is also reflected in the objectives of Wallonia’s smart specialisation strategy (Strategic Innovation Areas), which emphasise reducing the energy and environmental impact of its food production. For the bioengineer, the subject is complex because it covers processes from production through to the end of the transformation chain. The evolution of these sectors towards green production by managing assessments, reducing needs and losses (carbon footprint, water costs) and also by increasing value through recycling or recapitalisation must be guided by a quantified scientific evaluation. While many processes related to the production and processing of agricultural products are already studied within the Faculty, a cross-sectional assessment of the environmental balance of the entire value chain is as yet untouched in light of the challenges mentioned above.

### [Teaching activities](#)

The teaching activities consist of the introduction of environmental evaluation in courses directly related to components of the water-soil-air continuum and/or involving the use of material and energy resources (e.g. the use of water and energy in the production of electricity): GERE0024-1, *Ecosystem-atmosphere exchange under climate change*; GERE0034-1, *Practical assessment of soil and water resources*; GERE0025-1, *Digital eco-design*; GERE0028-2, *Physics of construction and special techniques*).

Activities also include:

- A contribution to the course “*Introduction to Environmental Assessment*” (ENVT2049-2, two credits) given by a faculty member of the Faculty of Applied Sciences, by providing concrete cases related to the production and processing of agricultural products.
- Responsibility for the activity “*Field applications and visits*” (two credits) in the Master’s in Bioengineering in environmental sciences and technologies, which should illustrate, through visits to companies and institutions, the notions of reducing the impact of human activity on the environment.

### [Research Activities](#)

The specific research activities of the position will focus on the environmental balance of one or more stages related to the production/processing of agricultural products, namely:

- Quantify the resources needed and the losses in the different environmental compartments (greenhouse gases or reagents, water, energy);
- Propose itineraries with a lower impact in light of the most recent knowledge.
- Integrating results into tools such as Life Cycle Assessment and participating in the development and improvement of these tools.

To develop applied research, the successful candidate will draw on the knowledge of other *TERRA* researchers in the field of environmental exchange and energy management.

#### Services to the Community

According to their skills, the successful candidate will be able to become actively involved in the Faculty Commission for Sustainable Development and to participate in facilitating the *VivaSciences* and *Green Office* workshops. They will also be able to take on responsibilities within the *Gembloux Campus Sustainability Committee*. They will represent the Faculty to institutions and organisations concerned with the environmental impact of agricultural products and will act as the lead spokesperson for the press and general public on this subject.

Other community service activities will be determined in consultation with senior staff.

#### Qualifications required / profile

- Must hold a first degree in agronomic engineering (or bioengineering) or an equivalent Master's degree and a doctoral research degree with experience in the relevant field;
- Must demonstrate recognised scientific experience, both in the field and through publications at international level in the relevant field;
- Must be open-minded to the international world (having completed a scientific stay abroad of at least six months is an advantage);
- Must be a good teacher (teaching experience is an advantage);
- Must demonstrate the ability to work on interdisciplinary themes;
- Must be able to work independently and within a team, using pooled human and material resources within the GxABT facilities, and must have excellent organisational skills and the ability to coordinate technical staff;
- Must be available for a variety of different roles relating to services to the community and public education;
- Master French and English (including writing);
- Must be available for missions abroad;
- Must subscribe to the general quality objectives developed by the University and the faculty;
- Upon appointment, the post holder must sign an agreement on the ownership of any research results.

#### Selection procedure

An ad hoc Faculty committee will select the candidates to be interviewed, giving reasons for its decisions in the light of the call for applications and the candidates' qualifications and merits. It will then interview the candidates. The committee will submit to the Faculty Council its reasoned proposal for appointment on the basis of the evaluation of the applications and the interviews.

On the basis of the information communicated by the committee and the comparison of the respective publications and merits of the candidates, the Faculty Council shall adopt a reasoned proposal for the

appointment or closure of the post, which it transmits to the decision-making bodies of the University of Liège.

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

### Applications

Applicants are requested to submit their applications electronically, to the following address: [Postesscientifiques@uliege.be](mailto:Postesscientifiques@uliege.be) with a copy to the **secretariat of the Dean of Gembloux Agro-Bio Tech**: [decanat.gembloux@uliege.be](mailto:decanat.gembloux@uliege.be) no later than **31/03/2022**.

### Documents required:

- An application (with a cover letter) accompanied by a complete curriculum vitae ;
- A report on past and current research activities and a research plan, including the envisaged integration within the University of Liège;
- A teaching file including a report on any prior teaching activities and a teaching plan;
- A complete list of the candidate's publications and a copy of the five publications they consider to be most significant in relation to the area in question.

### Recruitment conditions

The position shall be assigned either for a fixed term of four years, which may lead to the permanent appointment of the person concerned or on a permanent basis from the outset.

### Information

For any further information, please contact **Professor Frédéric Francis, Dean of the Faculty** – [doyen.gembloux@uliege.be](mailto:doyen.gembloux@uliege.be)

### Remuneration:

Salary scales and how they are applied are available from the human resources department of the University: **Ms Ludivine Depas** – tel.: +32 (0) 4 366 52 04 – [Ludivine.Depas@uliege.be](mailto:Ludivine.Depas@uliege.be)