

FULL-TIME ACADEMIC POSITION IN Multimodal AI in Medicine

École polytechnique de Bruxelles - Faculté de Médecine

Reference : 2025/A037

Application deadline: 18/04/2025

Start date: 01/10/2025

Job description

In today's healthcare and biomedical research landscape, the convergence of multimodal data and artificial intelligence (AI) represents both a challenge and an opportunity. As we strive to improve clinical and preclinical applications (performed on cell cultures and animal models), the need for innovative research and teaching in the field of artificial intelligence (AI) of images and multimodal data is paramount.

The university is inviting applications for a full-time position of Professor of Artificial Intelligence (AI), with teaching responsibilities in both the School of Engineering and the Faculty of Medicine. The activity will take place on the Université Libre de Bruxelles Solbosh and Erasme (university hospitals) campuses, with part of the research also taking place on the Gosselies campus.

Area of Research:

The Chair focuses on AI techniques applied to images and multimodal data (sequences/pixels/signals/text), with an emphasis on medical preclinical and clinical applications.

The integration of diverse data sources, including medical images from MRI, CT, PET, SPECT, ultrasound sequences, microscopy images (e.g. cytological and histological), (pre)clinical data, molecular data and textual data protocols, offers immense potential to revolutionize diagnostics, treatment planning and biomedical discovery.

The Université Libre de Bruxelles is a complete university, bringing together expertise in applied sciences, biology and medicine. It boasts a university hospital and dedicated technology platforms, including the inter-university(ULB-UMons) and inter-faculty Center for Microscopy and Molecular Imaging (CMMI¹).

¹ <https://www.cmmi.be/>

The interfaculty aspect of the Chair which, by its very nature, defines a good integration of the two fields of engineering on the one hand, and medical applications on the other, at both teaching and research levels.

The person who takes on the role will be part of the steering committee of the inter-university and inter-faculty pre-clinical imaging platform, the CMMI, with privileged access to its research infrastructures.

Educational and scientific goals:

We are looking for someone with pedagogical skills who also has a strong research profile in AI, machine learning and data science, who can lead the creation of interdisciplinary courses and research opportunities that intersect with healthcare, biomedical engineering and medical informatics.

The successful candidate will play a central role in developing curricula and research programs that support the integration of the engineering of AI into biomedical applications and healthcare.

Courses covered at the time of recruitment:

Initially, the candidate will be responsible for an engineering master's course in multivariate data analysis (STAT-H-400), a series of seminars attached to existing medical courses, and some courses in the medical informatics course (MEDI-G5591), the topics of which could be among the following:

- Introduction to AI in medicine and healthcare,
- Machine learning, deep learning, and data sciences for medical applications
- Medical image analysis with AI
- Natural language processing (NLP) for clinical texts
- Ethics and privacy in AI for healthcare
- Advanced topics in AI for biomedical engineering

The course load will evolve to include participation in basic computer science courses for engineering bachelors.

Courses in the Faculty of Medicine and in engineering bachelors are taught in French.

Qualifications required:

PhD Degree (with doctoral thesis) in Engineering or Sciences or Medical Sciences or Biomedical Sciences having a strong connection with the topic of the Chair.

Skills required

- Applicants should have at least 4 years of research experience at the time of their recruitment.
- Applicants who do not speak French may be granted a period of adaptation, but they must be able to reach at least the B1 level in French at the end of the third year following their appointment. A budget will be allocated to the hired person to enable them to attend training programs. If language training is necessary, this budget will be prioritized for that purpose.
- Demonstrate experience in teaching and developing academic content in the field of the Chair.
- Strong background in biomedical image processing and signal processing.
- Strong computer science skills

Assets:

- Post-doctoral experience and an excellent scientific record are a plus.
- Having experience with deployment of medical software (e.g. for research or with the industry) is 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 organize the work of multidisciplinary research teams on several campuses/mobility.
- Demonstrating the production of free open source software shared on public repositories is a plus.

Interested ?

For more information, please contact Mr Olivier DEBEIR (telephone: +32 2 650.22.93 – E-mail: olivier.debeir@ulb.be). For information about the gender equality politics of the Faculty, please contact Pr. Alessia Cuccurullo (E-mail: alessia.cuccurullo@ulb.be).

Your application will consist of a Curriculum Vitae (*if you wish, a standard CV can be downloaded from the website: <https://www.ulb.be/fr/documents-officiels/emplois-academiques-et-scientifiques-cv-type>*) and a document completed using the template available at this URL address <https://www.ulb.be/fr/documents-officiels/1e-applic-form-acad-tps-plein-docx>.

This template structures your application by including the following elements:

- 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 programs 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 shortlisted candidate will be invited to an interview conducted in English. Candidates will be asked to present a short lecture (English) on a prescribed topic of the chair domain aiming to assess the pedagogical skill. The French level will be assessed with a short informal discussion that will close the interview.

Incomplete applications or applications that do not use the template provided will not be examined by the selection committee.

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

Where to go to apply?

Click here: <https://jobs.ulb.be/job-invite/1458/?isInternalUser=true>

For any connection problems or questions about our application, consult our FAQ : [e-recrut-mode-d-emploi-candidat-en- 1734942996246-pdf](#)

Equal opportunities policy

Applications from women are strongly encouraged.

Equal pay between men and women is ensured by identical salary scales for all academic staff.

The purpose of the 'Cascade' initiative, which has no equal in the Wallonia-Brussels Federation, is to fight the 'leaky pipeline' effect, which refers to the decrease in parity at higher stages of academic careers and is common in Europe, in Belgium, and at the Université libre de Bruxelles. In order to fight this phenomenon, it was decided that the gender balance among promoted staff members is at least equal to that observed at the lower level of career progression.

The Brussels School of Engineering is particularly attentive to work-life balance: flexible working hours, telework options, etc.

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 [Gender equality](#) and [Diversity at ULB - ULB](#).

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