

FULL-TIME RESEARCH AND TEACHING ASSISTANT POSITION

IN (mechanical-, bio- ...) ENGINEERING

POLYTECHNIC SCHOOL OF BRUSSELS

Reference: 2018/S102

Start date: 01/10/2018

Job Description

The TIPs laboratory (www.tips-ulb.be) of the (Bio)Engineering school at ULB is looking to recruit a teaching assistant/PhD student, for a position starting on 1 October 2018. The objective of the research carried out in the TIPs department is the characterization and the modeling of phenomena taking place within multiphase systems. The research has direct applications in the fields of health, environment, micro-technology, materials...

An assistant position is a two-year term, renewable twice, with a teaching component and a research component.

During the teaching part of his activity, the hired person will be active in several bachelor courses delivered by the TIPs laboratory. She/he will organize and supervise exercises, involving basic engineering subjects such as general physics, rational mechanics, fluid mechanics and transport phenomena. A time of presence of about 150 h/year in front of the students will be considered, mainly during the first semester, in order to free up time during the second semester for stays abroad/congress, as part of the research activity.

During the research part of his activity, the hired person will complete a doctoral thesis under the supervision of Professors Benoit Haut and Pierre Lambert. The research conducted will be at the intersection of two themes of the TIPs service: microfabrication and the dynamics of physiological fluids. By combining in vitro experimental techniques (3D printing of nasal cavities, microfabrication of human lung models...) and in silico analysis (modeling and simulation of transport phenomena within the respiratory system), the objective will be to respond to fundamental and applied questions related to the physiology of respiration and its pathologies (asthma, cystic fibrosis, ...). Strong interaction with the Erasme Hospital will provide access to clinical data (or even allow planning new studies). The hired person will join a team of 5 people who, in the TIPs laboratory, carry out research activities in a similar field. She/he will thus find an environment favorable to the realization of her project.

The research work will be supported by international collaborations (stays of short or average duration at these partners will be possible during the thesis): Nice Sophia Antipolis University, Ecole central Marseille, Karolinska Institute (Sweden), ...

Required educational level

Master level in Engineering or bioengineering. The requirements for accessing a PhD program at ULB also need to be met.

Skills required

The hired person will have to report strong skills in the fields of mechanics, transport phenomena and physical chemistry.

Courses covered

The hired person will be involved in several courses delivered by the TIPs laboratory in the (bio)engineering bachelor degrees at ULB, involving basic engineering subjects such as general physics, rational mechanics, fluid mechanics and transport phenomena.

Interested ?

For more information, please contact Prof. Benoit Haut (telephone: +32 2 650.29.18 – E-mail: bhaut@ulb.ac.be) and Prof. Pierre Lambert (pierre.lambert@ulb.ac.be)

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

They must include the following:

- a motivation letter
- a Curriculum vitae including a list of publications (a template can be downloaded at <http://www.ulb.ac.be/tools/CV-type.rtf>)
- a note on the applicant's PhD research project (4 pages)
- two letters of reference

By sending in their application, applicants acknowledge they have read and understood the additional information and the regulations relevant to research staff, available at the following address <http://www.ulb.ac.be/emploi/academique.html>.

FICHE ADMINISTRATIVE

qui doit impérativement accompagner la vacance

n° de vacance : 2018/S102

Domaine : Sciences de l'ingénieur et technologie

Discipline : Ingénierie mécanique ou bioingénierie

Poste(s) au cadre : 18-C-ASS-098 (H) (0,50 ETP) & 18-C-ASS-140 (H) (0,50 ETP) - poste SAP 45833701

Références CoA : 26.03.18 pt III.03

Rattachement Enseignement : Transferts, Interfaces et Procédés (HU027)

Rattachement Recherche : Transferts, Interfaces et Procédés (HQ012)

EURAXESS SPECIFIC INFORMATION

Type of contract: temporary

Hours per week: 38

Main Research Field: Engineering

Sub Research Field: Mechanical engineering or bioengineering

Required educational level: Master level in engineering or bioengineering

Required Languages:

Français: Excellent

English: Excellent

Required Research Experiences: none

Researcher profile: Early stage researcher (0-4 years)