

# FULL-TIME ACADEMIC POSITION IN MECHANICAL AND AERONAUTICAL ENGINEERING, WITH EMPHASIS ON MULTIPHYSICS PROBLEMS

FACULTY/SCHOOL OF Ecole Polytechnique de Bruxelles

Reference : 2017/Axxx

Application deadline:

Start date: 01/10/20xx

## Job description

The present proposal for a full-time academic position in Aerodynamics, with emphasis on Multiphysics problems, aims to contribute to the teaching offer of the Brussels School of Engineering in the field of fluid mechanics, aero-thermo-dynamics and computational fluid dynamics, for the third year BSc in civil engineering and the Aeronautic option of the MSc in Electromechanical Engineering - Bruface.

The candidate will integrate one of the departments of the EPB and develop a teaching and original research activity in the broad field of aerospace technologies, developing projects in fluid mechanics, computational fluid dynamics and aero-thermo-dynamics. He will also contribute to the ongoing research activities in the field of reacting flows, atmospheric flows and turbomachines. Finally, the candidate will have the opportunity to establish a teaching and research collaboration with the Von Karman Institute (VKI), in the fields of hypersonic and plasma flows, and hypersonic propulsion system.

The candidate is expected to create an excellence center, in collaboration with national and international partners, to access new regional, federal, European (ESA and Horizon Europe) and international funding.

Areas of Research: Aerothermodynamics, Numerical and experimental fluid dynamics

### Educational and scientific goals:

The applicant will contribute to the teaching mission of EPB and, in particular, of the Aeronautic option of the MSc in Electromechanical Engineering – Bruface, jointly organised by ULB and VUB. He will also contribute to the diploma course program of VKI. The applicant will develop new courses in the field of aerospace engineering, especially hypersonic vehicles, establishing a strong link between his research and his teaching.

### Courses covered at the time of recruitment:

- Fluid Mechanics
- Numerical methods in Aerothermodynamics
- Computational Fluid Dynamics

## Qualifications required :

PhD Degree (with doctoral thesis) in one of the following fields : aeronautical engineering, computational fluid dynamics, numerical modelling, multi-physics simulations, plasma flows, propulsion systems, reacting flows.

## Skills required

- Applicants should have at least 4 years of research experience at the time of their recruitment.
- Post-doctoral experience and an excellent scientific record are a plus.
- Exchange periods outside of the applicants' home institution (during or after their PhD) will be taken into consideration when evaluating applications.
- Applicants who do not speak French (level B2) 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.
- Applicants should be able to integrate existing research teams
- Experience in multi-institutional environments/projects is a plus.

## Interested ?

For more information, please contact Mr/Ms xxx (telephone: +32 2 xxx.xx.xx – E-mail: [xxx@ulb.ac.be](mailto:xxx@ulb.ac.be)).

Applications must be sent by e-mail to the rectorate of the Université Libre de Bruxelles ([recteur@ulb.ac.be](mailto:recteur@ulb.ac.be)) and to the faculty deanship ([xxx.xx@ulb.ac.be](mailto:xxx.xx@ulb.ac.be)).

They must include the following :

- an application letter
- a Curriculum vitae including a list of publications (a template can be downloaded at <http://www.ulb.ac.be/tools/CV-type.rtf>)
- any relevant documents showing 4 years of research experience
- 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.

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 : 2017/Axxx

Domaine : (liste Paysage)

Discipline : (au choix)

Poste(s) au cadre : 17-x-xxx-xxx (x) (x.xx ETP) / poste SAP

Références CoA : <Grefte>

Rattachement Enseignement : Département/Service (Mnémon + intitulé)

Rattachement Recherche : Centre de recherche/Unité de recherche (Mnémon + intitulé)

## EURAXESS SPECIFIC INFORMATION

Main Research Field : (cf liste EURAXESS)

Sub Research Field : (cf liste EURAXESS - facultatif)

Required educational level: Phd Degree in (Degree Field – voir liste domaines EURAXESS)

Required Languages :

Français : (basic – good – excellent – native)

English : (basic – good –excellent – native)

'autre langue' : (basic – good –excellent – native)

Type of contract : temporary

Hours per week : 38

Required Research Experiences : (domaine – voir liste EURAXESS) : (nombre d'années d'expérience)

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

Experienced researcher - R3 (4 – 10 years) (vous pouvez laisser les 2 profils si vous le souhaitez)

Additional requirements :

[texte libre où l'on peut renseigner les domaines et disciplines non disponibles dans les listes Euraxess par exemple]