

Open full-time academic position in the field “Mechanical aspects of turbomachinery and aerospace propulsion”

Start date: September 1st, 2022

Référence de l'offre : FSA-211215-02

Description of the position

The School of Engineering invites applications for a **full-time academic position** in the field of “**Mechanical aspects of turbomachinery and aerospace propulsion**”, within the Department of Aerospace & Mechanical Engineering (A&M).

Work environment

The successful candidate will be affiliated with the Department of Aerospace & Mechanical Engineering (A&M) of the School of Engineering.

A&M is both a teaching department and a research unit. Building on the heritage of the former LTAS (Laboratoire de Techniques AéroSpatiales), it has achieved international recognition for the development of advanced numerical methods and tools and their applications in aerospace engineering. Numerical modeling forms the backbone of A&M research and is effectively complemented by a long expertise in experimental measurements that can leverage state-of-the-art infrastructure and equipment. A&M is particularly active in the fields of aerospace engineering, materials and processes, energy conversion, mechanical systems, and biomechanics.

A&M is committed to the development of multilateral and interdisciplinary scientific collaborations with other academic partners, research institutes and private companies/industries, at both the regional and international levels, to contribute to the advancement of knowledge and to support high level education/training programs.

A detailed description of the department and its activities can be found on its website <https://www.am.uliege.be>.

Responsibilities

Research activities

The selected candidate will develop an active research program in the field of mathematical modelling and/or experimental study of the mechanical behavior of turbomachinery.

Research projects related to the vibrations of blades, discs and shafts supporting the mechanical design of turbomachinery will be favored. The research may also address the problems of safety and efficiency of turbomachinery induced by new methods of manufacturing and the use of new materials, as well as the development of new methodologies, both experimental and numerical, using, for example, non-linearity and uncertainty quantification.

Teaching activities

The incumbent will be expected to teach in the field of vibrations and mechanical aspects of turbomachinery and, more generally, to contribute to teaching activities organized by the A&M department. This includes courses at both the undergraduate and master levels, such as for instance:

- MECA0155 - Dynamics of mechanical systems,
- MECA0029 - Theory of vibrations,
- MECA0062 - Vibration testing and experimental modal analysis,
- AERO0015 - Mechanical design of turbomachinery.

Other specific teaching topics in line with the candidate's research activities can also be proposed.

He/she will additionally participate in the supervision of internships and final year projects in his/her field of research.

The teaching load may not exceed 250 hours per year (including any practical work and seminars).

Service activities

The selected candidate will participate in service activities to ensure the visibility and promotion of the activities developed within the A&M department and the School of Engineering.

In particular, he/she will be attentive to consolidating existing collaborations with local research centers and industrial partners active in the field of turbomachinery, such as the Von Karman Institute for Fluid Dynamics and Safran Aero Boosters.

[Required qualifications](#)

The candidate will hold a PhD with thesis in a field directly related to the expected research activities. He/she will have international experience and publications in well-established international journals. He/she will be able to teach in English.

[Selection procedure](#)

All received application files will first be assessed by a selection committee appointed by the School of Engineering with both internal staff members and external experts. In a second step, short-listed applicants will be invited for an interview during which they will give a trial lecture, present their research project and discuss with the selection committee.

The University of Liège is an equal opportunity employer that strives to foster diversity. All qualified applications will receive consideration for employment without regard to their age, sexual orientation, origin, beliefs, disability, or nationality.

Application procedure

Candidates are requested to send their application electronically to Postesacademiques@uliege.be with a copy to **Mrs. Aurélie Lecca** (Aurelie.Lecca@uliege.be). The deadline for applications is on **February 15, 2022 at the latest**.

The following documents are required by the final date for applications:

- a motivation letter,
- a Curriculum Vitae including a complete list of publications,
- a list of 5 key publications and for each a short a description of their contribution to the state of the art,
- a summary of past and ongoing research, as well as a statement on future research including the planned integration within ULiège,
- a teaching statement including a report on previous teaching activities (if any) and a prospective pedagogical project,
- a copy of publications,
- full copies of certificates/diplomas.

Documents may be delivered either in French or in English and must be provided in electronic form (pdf).

Terms and conditions of employment

Depending on his professional track record, the selected candidate will be appointed either for an initial fixed term of four years, which may then lead to a permanent appointment, or hired on a permanent basis.

In the case of a four-year appointment, the achievements of the new academic will be assessed at the end of the third year.

- If the evaluation is negative, the appointment will end after the four-year term.
- If the evaluation is positive, he/she will receive tenure.

Informations

Additional information about research and education activities can be obtained from **Professor Olivier BRÜLS** – tel.: +32 4 366 91 84 – o.bruls@uliege.be

For any additional information, please contact **Mrs. Aurélie LECCA** – tel.: +32 4 366 94 68 – Aurelie.Lecca@uliege.be

Salary and benefits

Remuneration scales and how they are applied are available from the University's Human Resources department: **Mrs. Ludivine DEPAS** – tel.: +32 4 366 52 04 – Ludivine.Depas@uliege.be