FULL-TIME ACADEMIC POSITION
FACULTY OF APPLIED SCIENCES
FIELD: “DESIGN OF STEEL STRUCTURES”
START DATE: 01/09/2024

The University of Liège is the biggest French-speaking public university in Belgium. It employs more than 5,700 staff members across four campuses, including 3,600 active teachers and researchers in all fields of the human and social sciences, science and technology, and health sciences. In hosts nearly 27,000 students of 123 different nationalities in one of the most multicultural and dynamic cities in Europe, less than an hour from Brussels and Cologne, two hours from Paris, and three hours from London and Amsterdam.

Actively involved in the social and environmental transition, ULiège supports students to fulfill their roles as responsible citizens (training in sustainable development, Green Office, etc.) and promotes ethical, multidisciplinary and open research. ULiège is committed to the region in which it operates and contributes towards local socio-economic development. It has developed numerous partnerships, notably with the university hospital. International and united, it participates in the European University of Post-Industrial Cities, UNIC initiative and has one of the most extensive collaborative networks in the world.

ULiège offers attractive career prospects in a high-quality working environment, promoting well-being, diversity and equality of opportunity. Since 2011, ULiège has been proud to display the European Human resources strategy for researchers (HRS4R) label, which reflects its commitment to open, transparent and merit-based procedures. In addition, it recognizes the quality and diversity of research in line with the recommendations of the Coalition for Advancing Research Assessment (CoARA). ULiège encourages its academic staff to travel internationally and welcomes international researchers through its EURAXESS centre.

JOB DESCRIPTION

A full-time academic position, indivisible position, in the field of “Design of steel structures” within the Department of Architectural, Geological, Environmental and Civil Engineering (ArGenCo) of the Faculty of Applied Sciences. This position includes teaching and research activities as well as services to the community.

Owing to today’s specific environmental conditions where the construction industry is responsible for a large fraction of global CO2 emissions, there is an urgent need for changes in the way our societies build. In particular, the optimal design of steel structures shall contribute to develop more sustainable constructions.

The candidate's research aims will have to meet the societal challenges related to the rational use of materials under ever more demanding loading conditions, for example ensuring the robustness of the structures in accordance with Eurocode regulations. This standard also remains to be developed or improved in many aspects, a task that the candidate could also take up or contribute to.

This academic position will focus on the structural analysis and design of steel constructions, while anchoring it in the current context of access to natural resources and their rationalization. This position must be able to contribute to teaching in the Master of Civil Engineering and develop research relating to the analysis and behaviour of steel structures, based on the exceptional infrastructures of the Laboratory of Mechanics of Materials and Structures.
TEACHING ACTIVITIES

The skills of the future teacher (M/F/X) could naturally and usefully be expressed in some of the following courses:

- GCIV0644-1 – Structures métalliques et mixtes acier-béton
- GCIV2172-1 – Calcul d'éléments métalliques
- MECA0001-2 – Mécanique des matériaux
- GCIV0646 – Conception et exécution des bâtiments
- GCIV2171 – Nonlinear finite elements
- GCIV0608-1 – Introduction à l'ingénierie des constructions
- GCIV2030-2 – Conception structurale des bâtiments

The extensive list illustrates the variety of courses to which the candidate will have the opportunity to contribute, together with current faculty members. His/her actual teaching duties will include only a selection of courses from this list, depending on his/her profile and expertise. The candidate may also propose to develop other specific teaching(s) exploiting synergies with his/her specific research.

He/She will also participate in the supervision of internships and graduate work in his/her field of research.

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

RESEARCH ACTIVITIES

The successful candidate (M/F/X) will develop research in the field of "Design of steel structures" and supervise doctoral research work in this field.

- Structural analysis and design: behaviour of steel structures under different loads, such as wind, earthquakes and snow, accidental and exceptional loads. Teaching should cover the use of advanced analytical techniques and computer software to design and optimize steel structures. The current research themes focus on the one hand on the multi-scale aspect of the analysis: from the complete structure to its elements (beams, columns), connections, and connection components. On the other hand, they also relate to specific modelling scenarios such as those of rapid dynamics (with strain rate effect), varied non-linear effects, including the interactions that could exist between different parts of structures.
- Construction methods and techniques: study of various construction techniques and methods for steel structures, such as welding, bolted joints and prefabrication, but also construction techniques involving possible re-use of entire elements.
- Sustainable practices for steel construction: the teaching and research activities should include topics such as the use and analysis of recycled steel structures, energy-efficient (green) steel, or high-strength steel structures.

Real structures can be tested on a full scale, in whole or in part, in the Laboratory of Mechanics of Materials and Structures, to better understand their behavior. The candidate will be involved in the research activities led in this facility.

SERVICES TO THE COMMUNITY

Candidate will participate in service activities to ensure the outreach of the activities developed within the ArGEnCo department. He/She will:

- Ensure the valorization of his/her work within research networks, companies and public institutions active in his/her field of expertise,
- Contribute to the smooth running of the Department, the Faculty of Applied Sciences and the University of Liège through its various bodies.
QUALIFICATIONS REQUIRED / PROFILE

- Hold a PhD with thesis in a field directly related to the expected research activities;
- Have international research experience and publications in established journals;
- Be able to teach in English.

SELECTION PROCEDURE

Applications will be pre-selected on the basis of the candidate's file by a selection committee created by the Faculty of Applied Sciences. Successful candidates will then be invited to an audition that will include a sample lesson, a presentation of their research project and a general discussion with the selection committee.

In line with the University of Liège's institutional policy of diversity and equal opportunity, applicants are selected on the basis of their qualities, regardless of age, sexual orientation, origin, beliefs, disability or nationality.

APPLICATIONS

To be eligible, applications must be submitted via the online form available on the website https://my.uliege.be/portail/go_xt.do?a=o%7C11004%7Ce%7C568701. Complete applications must be submitted no later than 15/02/2024 (before midnight Belgian time). Late applications may be refused.

DOCUMENTS REQUIRED

The following documents, written in French or English, must be provided in electronic format (pdf) in support of the application:

- Motivation letter
- Curriculum vitae
- A copy of diplomas and certificates
- A list of the 5 main publications and a description of their contribution to the state of the art
- A report on previous and current research activities, as well as a research project, including the envisaged insertion within the University of Liège
- A teaching dossier including a report on any previous teaching activities and a teaching project.

CONDITIONS OF EMPLOYMENT

The position is awarded either for a fixed term of four years, or immediately on a permanent basis.

If a fixed term contract is awarded, an evaluation will be carried out at the end of the third year. If the evaluation is negative, the appointment will be terminated at the end of the four-year period. If the evaluation is positive, the appointment becomes permanent.

INFORMATION

A detailed description of the academic position and of the research and teaching environment are available on the faculty website.

Information about academic activities can be obtained from the Department Chair, Prof. Vincent DENOËL – Phone: +32 (0)4 366 29 30 – V.Denoel@uliege.be
Additional information may be obtained from: Ms Aurélie LECCA, Administrative Director of the Faculty of Applied Sciences – Phone: +32 (0)4 366 94 68 – Aurelie.Lecca@uliege.be

REMUNERATION

The salary grids and their rules of application are available from the Human Resources department of the University: Ms Ludivine DEPAS – Phone: +32 (0)4 366 52 04 – Ludivine.Depas@uliege.be

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