SCIENTIFIC POSITION 18 MONTHS (POSSIBLY EXTENDABLE BY 6 MONTHS)

REINVENTE - RECYCLING CONSTRUCTION AND DEMOLITION WASTES BASED ON A TECHNICAL AND ECONOMIC INVENTORY OF THE BUILT ENVIRONMENT

IN THE U.R. URBAN AND ENVIRONMENTAL ENGINEERING (PROF. LUC COURARD (C&DW RECYCLING), PROF. AURÉLIE DE BOISSIEU (BIM) AND PROF. JACQUES TELLER (URBAN PLANNING))

The University of Liège is an accomplished research institution with more than 3500 researchers and over 2000 doctoral students active across all disciplines: humanities and social sciences, life sciences, health sciences, and medicine. Researchers at ULiège have many opportunities to expand their networks and connections.

Moreover, ULiège welcomes every year numerous researchers, national as well as foreign researchers thanks to the EURAXESS contact center. ULiège seeks to be an attractive research institution by improving working conditions for researchers using the HR Strategy for Researchers (HR S4R), creating an inclusive and supportive research environment through the free of charge assistance mechanism offered to incoming researchers and their families or providing conditions for open, transparent, and merit-based recruitment of research positions.

For more details about what ULiège can offer you as a foreign researcher, please see https://www.recherche.uliege.be/cms/c_9281209/en/mobilite-euraxess or contact: euraxess@uliege.be.

ABOUT THE PROJECT

Structuring an efficient sector for recycling construction and demolition waste requires an in-depth assessment of the potential supply and market. The investments that will have to be made if Wallonia is to become the "recycling valley" for mineral waste recycling must be based on accurate and trustable data and the identification of specific recovery streams.

The aim of the project is to produce an exhaustive inventory of the building stock in the region, an estimation of the volume destined for demolition and therefore of the volume of materials available, with a view to setting up an action and development plan for the construction and demolition waste recycling industry. Both the methodology and the tools to be developed will use data management and artificial intelligence to prepare the Walloon industry for this challenge. The inventory is based on a cross-reference between existing databases (land registry, Lidar data, national and regional statistics, satellite images, etc.) and knowledge of the development of construction techniques in Northern Europe. It is intended to be supplemented by field surveys and/or BIM-type integration. The approach is designed with a view to achieving Net-Zero Land-Take and a massive adaptation of the existing building stock to present energy and climate challenges.
The project is part of the Circular Wallonia strategy and a broader approach oriented to polymer materials advisability, it is based on a request from the Walloon government to develop the circular economy, in particular by defining circularity indices and analysing the conditions for setting up efficient supply chains.

**Partners:**

ULiège: R. Billen (geomatics) and E. Pirarconsult:ources - Circular economy

UCLouvain: Th. Pardoen and I. Adam - UMons : J.-F. Raquez

**JOB DESCRIPTION**

We are looking for a post-doctoral researcher who is motivated and able to work with research teams at ULiège and UCLouvain/UMons, to develop the analysis methodology, applicable in Wallonia, in relation with the industrial world. The transfer of knowledge will take the form of scientific papers and participation in a training course for civil and architectural engineering students.

**MISSIONS**

- Produce an exhaustive inventory of the building stock in the region.
- Produce an estimation of the volume destined for demolition and therefore of the volume of materials available, with a view to setting up an action and development plan for the construction and demolition waste recycling industry.
- Both the methodology and the tools to be developed will use data management and artificial intelligence to prepare the Walloon industry for this challenge.

**PROFIL**

- PhD in engineering, urban planning, geomatics, or economics, related to data management.
- Excellent written and verbal French communication skills are required.
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- Team spirit, autonomy, and organizational skills
- Excellent reporting skills and ability to present scientific results (publications, conferences, project meetings, and seminars)
- Capacity to take responsibility for the progress and quality of projects.

**EMPLOYMENT TERMS**

- Type of contract: full time position as senior researcher at ULiège (postdoc – employed as a salaried employee)
- Length of contract: 18 months (may be extended by 6 months)
- Start date: January 2024 (or any time soon)

**OUR OFFER**

The candidate will benefit from a dynamic working environment, with stimulating scientific support, state-of-the-art laboratory facilities and advanced computational modelling tools.
Basic gross monthly salary for full-time work without recognition of seniority: approx. €4,800, subject to validation by the Human Resources Department.

Full reimbursement of home/work journeys made by public transport and access to a range of specific training courses for researchers are possible.

WHAT ABOUT TRAININGS?
For more information about training please consult: https://www.recherche.uliege.be/cms/c_12381524/fr/listing-des-formations-transversales

WORK ENVIRONMENT
You will work on the Sart-Tilman campus (B52 building).

HOW TO APPLY
Please send the following documents to stephanie.audrit@uliege.be before November 15th, 2023:
- Curriculum vitae
- Motivation letter

SELECTION PROCEDURE
Short-listed candidates will have to take part in an oral interview at the University of Liege or online.

Our institutional policy is based on diversity and equal opportunities. We select candidates based on their qualities regardless of their age, sexual orientation, origin, beliefs, disability, or nationality.

CONTACT DETAILS AND FURTHER INFORMATION
Informal inquiries about the project are welcome. Please feel free to contact:
- Prof. Luc Courard : Luc.Courard@uliege.be
- Prof. Jacques Teller : Jacques.Teller@uliege.be

Date of publishing: October 19th, 2023
Information on the processing of your personal data

The personal data collected follow your application will be processed by the ArGENCo/Urban and Environmental Engineering’s Department/Research Unit (School of Engineering) of the University of Liege for the purpose of organizing the selection and recruitment.

These data will be processed based on the execution of pre-contractual measures (art. 6-1, b. of the RGPD)

These data will be kept for the duration of the selection procedure and, at the most, 9 months after the publication of the job offer. This data will not be passed on to third parties.

In accordance with the provisions of the General Data Protection Regulation (EU 2016/679), you may exercise your rights relating to this personal data (right of access, rectification, deletion, limitation, and portability) by contacting the ULiège Data Protection Officer (dpo@uliege.be - Mr. Data Protection Officer, Bât. B9 Cellule "GDPR", Quartier Village 3, Boulevard de Colonster 2, 4000 Liège, Belgium). You also have the right to lodge a complaint with the Data Protection Authority (https://www.autoriteprotectiondonnees.be , contact@apd-gba.be).