

Doctoral and postdoctoral positions available at the University of Liege, Belgium

# Modelling nature-based solutions for fluvial flood risk reduction

The research group *Hydraulics in Environmental & Civil Engineering* (HECE) of the University of Liege is seeking doctoral and postdoctoral candidates for conducting research in projects related to nature-based solutions for flood risk management.

The group HECE leads basic and applied research in the fields of hydrology, flood risk management, hydraulic engineering as well as fluvial hydrodynamics. The research builds upon a tight coupling between computational modelling and laboratory experiments.

The group develops the modelling system WOLF, which includes rainfall-runoff models as well as 1D and 2D flow and transport models. It is based on an in-house developed finite volume numerical scheme and is equipped with a dedicated GIS-type user interface. WOLF is routinely used for education, consultancy and research ([link](#)).

The group also operates a unique experimental facility (1,100 m<sup>2</sup>), equipped with state-of-the-art measurement techniques (ADVP, LS-PIV, laser profilometry ...).

The group HECE is part of the Research unit *Urban & Environmental Engineering*, with 25 faculty staff and 100+ researchers.

## Function

We are looking for highly motivated doctoral and postdoctoral candidates to join our group and contribute to several on-going research projects dealing with hydrological and hydrodynamic modelling of nature-based solutions and their effects of flood danger and risk. The specific topic of each position will be defined based on detailed discussions with the candidates (background, interest ...).

The candidates will also contribute to teaching and project activities, which is an asset for their professional development.



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### Profile

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Applicants for doctoral position must have completed a master degree in a field closely related to civil engineering, environmental engineering, mechanical engineering or physics. Postdoctoral candidates must have completed their PhD within the last 6 years in a field of relevance for the call.

Excellent written and verbal English communication skills are required. *French literacy is an asset. Preference will be given to candidates with a strong interest and a good level of proficiency in computer programming (e.g., Python ...).*

### We offer

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Candidates will be fully funded (tax-free monthly allowance, approx. 2,400 € at the doctoral level) for up to 4 years, after a trial period (3 months). They will benefit from a dynamic working environment, with stimulating scientific support, state-of-the-art laboratory facilities and advanced computational modelling tools. They may be requested to apply for extra funding.

The University of Liège offers a comprehensive and innovative training program ([link](#)), which enables early-career scientists to carry out their research in the best possible conditions, in compliance with the European Charter for Researchers ([link](#)), and so, has developed a HR Strategy ([link](#)).

### How to apply?

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Interested candidates should apply by email to [c.ghymers@uliege.be](mailto:c.ghymers@uliege.be) with a curriculum vitae, full transcripts of Bachelor and Master studies, and two references. Short-listed candidates will have to take part in an oral interview at the University of Liege. The positions will remain open until filled; but the selection will start from May 15<sup>th</sup>, 2023. Starting date is expected in the period from July to September 2023, or earlier.