

Vacancy: PhD position on the attribution of European floods

Europe and other mid- and high-latitude regions in the world have experienced a number of unprecedented extreme climatic events in the past years, in particular heatwaves and droughts, as well as catastrophic floods like those that occurred in Belgium in the summer of 2021. *Attribution* is the research area at the crossover of climate science and statistics that aims at evaluating the relative contributions of different causal factors to the occurrence of extreme events. It serves in particular to pinpoint the possible role of anthropogenic climate change in these extremes.

We are seeking a talented PhD candidate to join us in the effort to **better constrain the probabilities of occurrence of past and future extreme events and to arrive at robust attribution statements**. The PhD candidate will investigate flexible and physically realistic non-stationary extreme-value models for the attribution of **heavy precipitation and floods** over different regions of Europe. In particular, he/she will identify physical covariates that take into account the regional response to climate change in both thermodynamical and dynamical properties.

The PhD candidate will be based at the institute of Statistics, Biostatistics and Actuarial Sciences (ISBA, part of **LIDAM**, the Louvain Institute of Data Analysis and Modeling in economics and statistics) at UCLouvain. He/she will be supervised by Anna Kiriliouk (UCLouvain) and Francesco Ragone (Department of Mathematical and Computational Modelling, University of Leicester).

The PhD grant is financed through the *Action de Recherche Concertée (ARC)* called **EXALT - EXtreme weather Attribution at mid- and high-Latitudes** using advanced statistical Techniques, see [here](#) for more information. This interdisciplinary project is a collaboration with the Earth and Climate Center (part of **ELI**, the Earth and Life Institute) at UCLouvain. Other EXALT researchers are currently studying heatwaves and compound drought-heat events over Europe, and sea ice extent reduction in the Antarctic.

We offer:

- a full-time **three-year**¹ PhD grant, starting from October 1st, 2026.
- a net salary of around 2500 euros/month
- an international and multidisciplinary working environment
- travel opportunities for attending scientific conferences and doing research visits
- access to a high-performance scientific computing environment
- opportunities to gather experience in statistics teaching and consultancy

Expected profile: you are holding a master degree (120 ECTS) obtained with distinction in statistics, mathematics, physics, climatology, earth sciences, engineering, or a similar domain. Your skills and interests include

- statistical modelling
- programming skills in, for instance, R and/or Python
- fluency in English, spoken and written (some knowledge of French is a plus)
- autonomy, a sense of initiative and proactivity
- experience with extreme-value theory and/or the analysis of climate data is a plus

How to apply: please send your CV and motivation letter, with the contact details of at least two references, to Anna Kiriliouk (anna.kiriliouk@uclouvain.be) and Francesco Ragone (fr120@leicester.ac.uk) with subject “EXALT PhD application” at your earliest convenience.

¹A one-year extension may be possible if additional funding is obtained in the coming years.