

Ph.D. position in Earth Observation and Ecohydrology

We are searching for an enthusiastic Ph.D. student to work on the project entitled **“Early Detection of Plant Water Stress using Remote Sensing of Chlorophyll Fluorescence”**

Research Project

Climate change and, in particular, the increase in frequency and intensity of drought events during the next decades will adversely affect plant growth and reduce crop productivity in many regions of the globe. One of the strategies to mitigate the effects of climate change on crop production is to develop techniques to detect plant water stress before significant damage occurs. Remote sensing techniques are particularly well adapted to monitor vegetation properties at large scales. In recent years, significant progress has been made in the development of satellite-based instruments and data analysis techniques offering new opportunities for monitoring vegetation properties. This research project aims at using remotely sensed chlorophyll fluorescence data from satellite platforms and ground-based instruments in order to detect plant water stress. In particular, field-scale controlled experiments in combination with model simulations will be performed to better understand the chlorophyll fluorescence signal emitted from plants and the impact of water stress on this signal.

The Institution

The candidate will be hosted in the Environmental Sciences of the Earth and Life Institute (ELI) of the Université catholique de Louvain in Louvain-la-Neuve, Belgium (<https://uclouvain.be/en/research-institutes/eli>). Additional information regarding UCL can be found at <http://www.uclouvain.be>.

The candidate will work under the supervision of Prof. François Jonard and Prof. Pierre Defourny.

The project involves collaboration with the Massachusetts Institute of Technology (MIT/Parsons Laboratory, Cambridge, US) in the framework of the MISTI program and with the Jülich Research Centre (FZJ/IBG-3, Jülich, Germany), where research stays will be organized during the Ph.D.

Profile

- Master in Bioengineering, Geography, (Eco-)Hydrology, Earth Observation, or equivalent
- Creative, critical, analytical and innovative mindset
- Ability to work independently
- Excellent written and oral communication skills in English

Offer

- A PhD scholarship for an initial duration of 15 months renewable to 4 years upon successful application to FRIA funds.
- The candidate will benefit from social security coverage.

Interested?

The application should be sent in one single PDF including a motivation letter, a curriculum vitae (mentioning your study grades) and the names and contact details of two referees.

Apply for this job as soon as possible but **no later than 23rd July 2018**. The PhD research should start in October 2018, but the exact date can be negotiated. This position will remain open until filled by an excellent candidate.

Applications should be sent to francois.jonard@uclouvain.be