PhD position in the CANOPI project – Upscaling/Remote-Sensing work package

Employer: Liege University  
Location: Gembloux, Belgium  
Closing date: 01/09/2022

Given the rapid changes in climate, immense shifts in forest composition, functioning and carbon balance are expected in tropical forests in central Africa. However, no studies have confirmed this worrisome trend using ground-based data, keeping central Africa a particularly understudied region despite its overwhelming size.

Whether tropical forests in central Africa will be sensitive to drier conditions—because they are already limited by water availability—or resistant—because they are adapted to seasonal drought—is the ambitious challenge CANOPI aims to tackle (https://www.canopi.uliege.be/).

Your position

The CANOPI project is transdisciplinary and divided in five complementary work packages, each supported by one doctoral work. This position is relative to the fifth work package, whose main objective is to map central African forest functional properties, and in particular to upscale our understanding of canopy functioning built in the other WPs.

The selected candidate will:
- Build a data library with relevant indicators to characterize tree ecophysiology of key canopy species from spectral properties;
- Collect and build a library of spectral and lidar images from Unmanned Aerial Vehicles (UAV) to characterize ecosystem canopy phenology;
- Develop innovative methodologies based on the fusion of active and passive remote sensing products to upscale UAVs based understanding of ecosystem phenology.

Your profile

We are looking for a highly motivated candidate with a self-organized and solution-oriented work attitude. Applicants should hold a MSc degree in bio-engineering, geography, biology, environmental science, computational biology or related fields. The candidate should have strong affinities with innovative remote sensing technologies and recent development in big data (e.g., drones, cloud computing tools, …) but should also be willing to conduct fieldwork under harsh logistic and climatic conditions. The candidate should be able to independently conduct spatial and statistical analyses (in R or other programming language). The candidate should be able to speak properly in French for the field and to speak and write properly in English for interactions with colleagues and for scientific communication.

We offer you

A fully-funded PhD position for four years (as of 01/10/2022) in a dynamic research group including professors and other colleagues from Liège and Ghent Universities in Belgium, and from CENAREST in Gabon and from INERA in Democratic Republic of Congo. You will join a supportive, collaborative and cooperative working environment. You will have the opportunity to be integrated in established (inter)national research networks. Salary and social benefits are provided according to the rules of Liege University.

How to apply

Prepare a 1-page CV and a 1-page motivation letter and send this to jfbastin@uliege.be