PhD Position in forest growth – focus on 3D modelling of tree structures

Duration: 3 years, 65 % of a full-time employment
Start date: 1st June 2021*
Salary: "Entgeltgruppe 13 TV-L" (Pay grade 13 of the German public service salary scale)

Subject to a positive evaluation of the project proposal!

Background

Our agricultural production systems are facing several challenges within the upcoming decades in the light of a dramatic loss of biodiversity as well as climate change that will negatively influence these systems and new solutions to reduce these effects are urgently needed. The research project *INTEGRA* targets the employment of agroforestry systems (AFS) as a potential response. The project aims at investigating the ecosystem services and environmental benefits of AFS as an innovative, multi-purpose land-use management practice with a special focus on trees as food resource and important habitat for pollinator insects. For that purpose, we will thoroughly investigate trees and shrubs in AFS using 3D data.

Main tasks in this PhD position

- Collection of 3D data utilizing a terrestrial laser scanner
- 3D data processing and data evaluation
- Structured programming e.g. R or python
- Planning and conducting field work
- Publication of experimental results in high-ranked scientific journals
- Presentation of results at international conferences

Requirements

We are searching for a highly motivated junior researcher (m/f/d) in the field of computer sciences, geomatics, bioinformatics, remote sensing, ecology, forest sciences, agricultural sciences or related fields. The candidate should have:

- An MSc degree in one of the above-mentioned fields
- A high interest in structural modelling and/or 3D modelling
- A strong background in a high-level programming environment e.g. R, C++ or Python
- The ability to work independently as well as part of an international team
- Excellent English communication skills (written, verbal)

- Preferred: a demonstrated ability to successfully carry out relevant research, including the analysis of data and written communication of results.

We offer
- A PhD position with salary (TV-L E13, 65%) for 3 years based at the University of Freiburg, Germany
- work in an international team with long-year experience in ecological research
- The possibility to gain experience in advanced methods using 3D models to investigate growth behaviour of trees
- To engage in top-notch research and the possibility of teaching (no obligation) with a unique spectrum of disciplines, perspectives, and people at University of Freiburg
- The opportunity to obtain a PhD degree at University of Freiburg
- To work for one of the most renowned and strongest research universities in Germany with a history spanning more than 500 years.
- To live right in the heart of one of Germany's most beautiful cities located at the foot of the Black Forest in close vicinity to France and Switzerland, with a rich cultural and academic life and excellent recreational opportunities.

How to apply
Please send your application, consisting of an application letter of max. 1 page, your CV, relevant certificates (MSc., BSc., Diploma etc.), one reference letter and the names and contact details of two academic reference persons by 30th April 2021 to christopher.morhart@iww.uni-freiburg.de (Subject: "PhD position INTEGRA")
All documents should be merged to one single PDF-file!

More information
For more information, please do not hesitate to contact Dr. Christopher Morhart, via email at christopher.morhart@iww.uni-freiburg.de .
Please find more information about the Chair of Forest Growth at:
http://www.iww.uni-freiburg.de/

The University of Freiburg's human resources policy is oriented toward the principles of equal opportunity and diversity and encourages women to apply.

Please note
We regret that we cannot reimburse applicants travel and lodging expenses incurred as part of the selection and hiring process. Furthermore we would like to point out that in case your application is sent electronically without protection, the University of Freiburg cannot guarantee the security of the personal data transmitted. By submitting an application, you as an applicant give your consent for your data to be electronically processed and stored for the purpose of filling a vacancy.