



**ULiège is RECRUITING a team of 3 PhD candidates for the project “CHAR”:
« Century-old CHARcoal kiln sites as an experimental site for assessing long-term biochar effects on agronomical and environmental performance of agricultural soils ».**



Within University of Liège (Belgium), we are looking for 3 highly motivated candidates to take up a PhD position. The positions are available within the collaborative project CHAR between three faculties of ULiège: Gembloux Agro-Bio Tech, Sciences, and Engineering, and in close collaboration with the Centre for Environmental Sciences (Earth and Life Institute; UCLouvain). The PhD positions are fully funded for 4 years, starting on 1st October 2017.

The project focusses on the responses of cropping systems to the variations of pedological and hydraulic soil properties induced by charcoal accumulation over more than 150 years. The system is analogue to biochar (a carbon rich solid phase produced by pyrolysis) accumulation, a soil amendment whose long-term impacts on the soil-plant system are yet to be investigated.

The three PhD students will work on the same calibration field with different techniques in which we will target multiple charcoal-enriched soil spots and their adjacent reference soils. As such, we will be able to study the long-term response of the soil-plant system to charcoal enrichment. The three PhD topics are:

1. **PhD1** will use **physico-chemical analytical techniques** to assess how the evolution of soil chemical characteristics control nutrient dynamics in soil-plant systems (supervised by Pr. J-T. Cornelis, in Gembloux Agro-Bio Tech Campus).
Profile: A MSc degree or equivalent in soil science or environmental sciences, or related discipline. A strong background in pedology, agronomy and biogeochemistry is an asset.
2. **PhD 2** will use **geophysical methods** to assess the spatio-temporal patterns of soil hydraulic properties and root water uptake and their relationship to charcoal enrichment (supervised by Prs. F. Nguyen and S. Garré, in Gembloux Agro-Bio Tech Campus).
Profile: a MSc degree or equivalent in geophysics, physics, soil or geo science, engineering, or related discipline. A strong background in physics or geophysics, applied mathematics, and numerical methods is an asset
3. **PhD 3** will use **modeling and remote-sensing techniques** to assess the impact of charcoal on crop performance (supervised by Pr. B. Tychon, in Arlon Campus).
Profile: A MSc degree or equivalent in agronomy, geography, environmental sciences, or related discipline. A strong background in modeling and remote sensing is an asset

General requirements

- English language proficiency;
- Team player and field work
- Written and oral communication skills

Interested candidates should send a CV, a motivation letter and the names and addresses of three referees before **1st of July** by e-mail to Jean-Thomas Cornelis (jtcornelis@ulg.ac.be), mentioning the PhD (#1, 2 and/or 3) for which he/she is applying.

Feel free to contact us (jtcornelis@ulg.ac.be, sarah.garre@ulg.ac.be, F.Nguyen@ulg.ac.be, Bernard.Tychon@ulg.ac.be) for specific questions prior to submitting your application.

For more information on the University, follow this link: https://www.ulg.ac.be/cms/a_16380/en/campus-student-life

For more information on becoming a PhD student at the ULiège, follow this link: https://www.ulg.ac.be/cms/c_25325/en/doctoral-student

Looking forward to receiving your application,

Sarah Garré, Frédéric Nguyen, Bernard Tychon and Jean-Thomas Cornelis