PhD opportunity

Hanging around: using artificial intelligence to understand the persistence of soil carbon

Application deadline Friday 27th July 2018

Would you like to earn a **PhD doing research at the cutting edge of technology**? Would you like to produce novel science that could help shape land use and management in the future, and contribute to global change initiatives (www.4p1000.org)? Artificial Intelligence, such as machine learning, offers great opportunities to gain new insights through novel concepts of data analyses. Machine learning will help us enhance our understanding of environmental processes in a way that has not been possible before.

We are offering a 3.5 year PhD project based at the Centre for Ecology & Hydrology in Bangor, close to Snowdonia National Park, as part of the IAPETUS Doctoral Training Programme. The project will have access to unique UK and global soil property datasets. **You will utilise machine learning methods to build relationships between soil carbon and environmental data.** You will use these algorithms to test our current understanding of the factors and drivers for the persistence of carbon in soils at landscape scales. You will apply these outputs to further soil process models to increase soil carbon sequestration in soils as a measure for climate change mitigation.

The studentship will benefit from close collaborations between global change and soil experts at the Centre for Ecology & Hydrology and the British Geological Survey, and experts in machine learning from Cranfield University. During the PhD there will be opportunity for research placements at ISRIC in the Netherlands and policy placements in the UK.

Applicants should hold a minimum of a UK Honours Degree at 2:1 level or equivalent in subjects such as Environmental Science, biostatistics, maths, and engineering and have a strong interest in data wrangling, big data, coding, R or python.

If this sounds exciting, send a CV, a cover letter (no longer than 2 sides A4), and at least two references to Dr Sabine Reinsch (sabrei@ceh.ac.uk) by latest Friday 27th July. First round interviews will be conducted on Monday 30th July 2018 with the supervisory team. The top candidate will be selected and a second round interview will be conducted on 8th August 2018 with the IAPETUS committee. If successful the PhD studentship will start October 2018.

For further details please contact Dr Sabine Reinsch: sabrei@ceh.ac.uk.