

PhD Student with a degree in geophysics, physics, electrical engineering, computational geoscience, or related natural sciences

Advertising institute: IBG-3 - Agrosphere

Reference number: D115/2015, Natural Sciences, Engineering Sciences

For our Institute of Bio- and Geosciences - Agrosphere (IBG-3), we are seeking a

PhD Student with a degree in geophysics, physics, electrical engineering, computational geoscience, or related natural sciences

for a three-year PhD position, probable starting date: 1. October 2015.

Project description: **“Large-scale EMI and GPR hydrogeophysical soil characterization”**

In the IBG-3, advanced modeling and inversion algorithms are developed and applied for a wide range of hydrogeophysical studies using ElectroMagnetic Induction (EMI) and Ground Penetrating Radar (GPR) systems. This PhD position is part of the BMBF funded project “Soil3” on sustainable subsoil management. The primary objective of this project is to extend and apply existing large-scale EMI and GPR data processing algorithms for the time-lapse characterization of the top- and subsoil of long-term agricultural field experimental sites. A significant part of the project consists of field work with state of the art multi-channel EMI and GPR systems. The project offers the unique opportunity to connect novel processing and inversion techniques to real data in a state-of-the-art computational environment.

Your Profile:

- University degree in geophysics, physics, electrical engineering, computational geoscience, or related natural sciences with a good final grade;
- Geophysical field work experience, preferably with EMI and/or GPR.
- Advanced knowledge of numerical methods
- Experience in (matlab) programming
- Strong English writing and communication skills.

We Offer:

- working in an interdisciplinary environment as well as excellent facilities for hydrogeophysical research and numerical simulation and inversion studies
- Opportunities to being part of the national and international scientific community
- PhD students are encouraged to attend international conferences and a three months research stay abroad with a cooperating partner is planned.

For further information please contact Prof. Jan van der Kruk, Phone: +49 2461 61-4077, e-mail: j.vanderkruk@fz-juelich.de or visit our webpage www.fz-juelich.de/ibg/ibg-3.

Please send your **application** - quoting the reference number and the position of interest - with the relevant documentation to: Mr. K. Beumers, Institut für Bio- und Geowissenschaften, Forschungszentrum Jülich GmbH, 52425 Jülich, Germany, e-mail: k.beumers@fz-juelich.de.