

16.05.2017

**Research Associate Position at the German Aerospace Center (DLR)**

**Soil Remote Sensing Specialist: Algorithm and processing chain development for analysis of multi- and hyperspectral image data**

Qualifications: Soil Science, Earth Observation, Geomatics

Start: Immediate

Duration: 3 years

Affiliation: German Aerospace Center, Germany (Oberpfaffenhofen, near Munich)

Institution: German Remote Sensing Data Center (DFD), Land Surface Department (LAX), Spectroscopy and Landdegradation Team

**Your Mission:**

One of the mandates of the DFD is the development of operational processing chains for geoscientific information products using airborne and spaceborne Earth Observation data. In addition to the large multispectral Earth Observation archives, such as for Landsat and the Sentinels, operational data products of spaceborne imaging spectroscopy missions such as EnMAP will be available in the near future.

Currently, DFD develops large-scale information products that characterize soils and allows for monitoring related environmental processes. The products are based on long-term multispectral Earth Observation data of the Landsat mission starting from 1984. A full end-to-end processing chain has been developed starting from data access and ingestion, various preprocessing steps, data quality checks up to building multitemporal composites to extract and highlight information about soils.

Your mission will be (1) to further enhance these data products by improving the end-to-end algorithms to allow for processing on continental scale, (2) to retrieve reliable soil information from resulting EO soil repositories by linking to existing soil profile information and (3) to develop new ideas for integrating future spaceborne imaging spectroscopy missions into the processing chain for enhancing the thematic detail and the accuracy of the soil information products. The data products are further analyzed in the biodiversity and land degradation context.

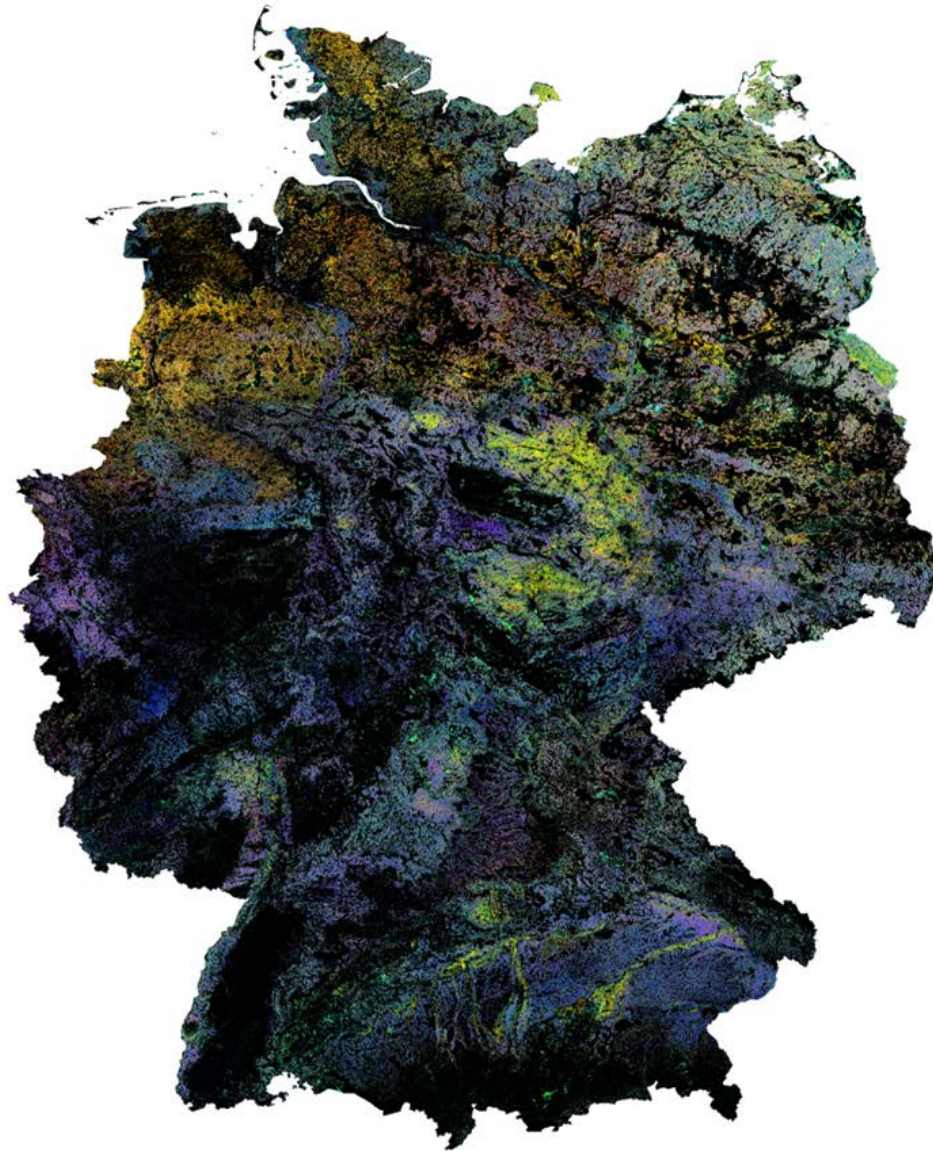
You are working in a scientific environment in close collaboration with national and international experts, you are integrated into an experienced team and you will be developing sustainable solutions in the national AGRO-DE project framework (funded by the Federal Agency for Agriculture and Food). The work will include the presentation of project results at project meetings, national and international conference as well as in the form of peer-reviewed publications.

**Your Qualification:**

- Ph.D. in Soil Science and Earth Observation or equivalent
- Profound knowledge in digital soil mapping and / or large scale soil data bases
- Expert in Earth Observation, specifically processing of optical (hyperspectral and multispectral) image data, knowledge of vegetation and soil spectroscopy
- Very good programming skills and experiences in one or more of the following languages (e.g. C/C++, Python, IDL, R, etc.)
- Good knowledge in the development of processing chains
- Very good knowledge of English
- Communication skills, high commitment and teamwork

# Soil Composite Repository Germany

based on Landsat images between 1984 and 2014



## **Your Start:**

You can look forward to a fulfilling job with an employer who appreciates your commitment and promotes your personal and professional development through various on-site training and qualification opportunities. Our unique infrastructure offers a working environment in which you have unparalleled scope to develop your creative ideas and accomplish your professional objectives. We are striving to increase the proportion of female employees and therefore particularly welcome applications from women. Disabled applicants with equivalent qualifications will be given preferential treatment.

## **Deadline for applications:**

End of May

## **Contacts:**

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