



DLR – DAAD Fellowships

Fellowship No. 460

Research Area : Space

Research Topic: **Exploring and comparing the potential of hyperspectral and hypertemporal EO data for local coastal analyses**

DLR Institute: German Remote Sensing Data Center DFD in Oberpfaffenhofen, Department Land Surface Dynamics

Position: Doctoral Fellow

Openings: 1

Job Specification:

The central research question of the 3-year DAAD grant for the preparation of a doctoral thesis is to evaluate the potential of the synergistic use of hyperspectral remote sensing data and multi-/hypertemporal Earth observation data (e.g. of the ESA Copernicus program) for coastal zones. The thesis will make use of hyperspectral data of the DESIS sensor installed on the International Space Station. Providing 235 spectral channels in the 400 – 1000 nm range, DESIS data contain valuable information about different surface types and ecosystems. The thematic focus of the thesis is the coastal zone. This dynamic interface between land and water provides space for vulnerable ecosystems like lagoons, wetlands and mangroves. At the same time, it is one of the most dynamic areas for fast growing urban regions, infrastructure, transport and economic development. Methodologically, automated data processing and data analysis shall be developed, as well as existing methods improved. The selection of several test areas worldwide will enable to validate the transferability of the methodology. All available DESIS data will be subjected to the developed methodology.

The doctoral scholarship is supervised together with the Remote Sensing Department of the University of Würzburg.

Required Qualification:

- Master in geosciences (geography, geodesy, environmental science), natural sciences (physics), data sciences, or comparable course of university studies
- Experience with spatial and time-series analysis and geographical observations
- Extended knowledge of Earth observation/remote sensing data analyses, and methods
- Profound experience in the analysis of raster data (preferably with Python, R)
- Experience in scientific writing
- Very good English language skills, both written and spoken
- Ability to work in a team as well as independent, creative and goal-oriented way of working

Advantageous Skills:

- German language skills are advantageous

English competence: See requirements on www.daad.de/dlr

Earliest Start Date: 1 January, 2021

Application Deadline:

Further Information: <http://www.dlr.de>
<http://www.daad.de/dlr>