



DLR – DAAD Fellowships

Fellowship No. 470

Research Area : Space

Research Topic: **Deep Learning for Large Scale Earth Observation Data**

DLR Institute: Remote Sensing Technology Institute (IMF), DLR Oberpfaffenhofen

Position: Postdoctoral Fellow

Openings: 1

Job Specification: Earth observation (EO) has irreversibly arrived in the Big Data era. This requires not only new technological approaches to manage large amounts of data, but also new analysis methods. Here, methods of data science and artificial intelligence (AI), such as machine learning, become indispensable. The Copernicus concept also calls for global applications, i.e., algorithms must be fast enough and sufficiently transferrable to be applied for the whole Earth surface. The goal of this position is to develop new concepts, deep learning methods and pipeline tailored to large-scale Earth observation problems, such as land cover mapping or change detection from large-scale multi-source and multi-temporal remote sensing data. Tasks that are of particular importance include but are not limited to semantic segmentation, domain adaptation, transfer learning, and data fusion.

This position will be in close collaboration with the So2Sat project (so2sat.eu) funded by the European Research Council and the international future AI lab AI4EO (ai4eo.de) funded by the German Federal Ministry of Education and Research. The candidate will be able to apply her/his novel algorithms to tackle real world grand challenges in a global scale.

Required Qualification: PhD or Dr.-Ing. in remote sensing, computer science or in a similar field; Programming skills in Matlab and Python; Strong experience in developing machine learning /deep learning algorithms for remote sensing tasks; Open communication and team spirit.

He/she should be able to work in a team at the Remote Sensing Technology Institute of DLR as well as to be self-reliant and to present results at international conferences and in scientific journals. Due to possible cooperation with Chinese research institutes, Chinese language skill is appreciated.

Advantageous Skills: Experience in deep learning applied to large scale remote sensing data; Experience in creating benchmark datasets; Experience with unsupervised/semi-supervised Learning as well as Transfer Learning for large scale data sets.

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

Earliest Start Date: 01.02.2021

Application Deadline: Until position filled

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