



Signal Processing in Earth Observation "SiPEO" – Open PhD Position

Fusion of Social Media Images and Remote Sensing Satellite Data

Description:

Over the last decade, the rapid development of social media has accumulated vast amount of online data. Most of them exist in the form of terrestrial images, such as the public images on Flickr and Facebook. Many of them carry useful information of the local environment, such as land use, urban infrastructure. Despite their uncontrolled quality, their sheer quantity can be complementary to remote sensing data obtained from satellites whose temporal and spatial coverages are dependent on the sensor platform.

In the framework of the ERC project "[So2Sat](#)", the general goal of the envisioned doctoral research is to develop efficient land use / settlement type classification and change detection techniques using social media images aided by remote sensing data. Object recognition and change detection methods will be exploited for extracting useful information, such as building 3-D geometry and temporal evolution, from the massive online images. Deep learning techniques will also be studied for the classification of those images. The candidate is also expected to be involved in website development for collecting social media data.

This position is offered by Signal Processing in Earth Observation "SiPEO", German Aerospace Center (DLR) and Technical University of Munich (TUM), whose mission is to develop explorative algorithms to improve information retrieval from remote sensing data, in particular those from current and the next generation of Earth observation missions. The PhD work will be carried out jointly with the Remote Sensing Technology Institute, DLR (DLR-IMF) and TUM-SiPEO.

Profile:

- Master in Earth Sciences (Geophysics), Maths, Physics, Computer Science or equivalent
- Previous experience in deep learning and change detection in optical images is preferred
- Have or acquire during the research an in-depth knowledge of programming
- Creative and passionate

The position is funded for a three-year period, with possible extension of up to 1 year. Additional funding for conferences and publications is granted. Optional academic exchange is negotiable. Interested candidates should submit a full curriculum vitae, cover letter together with academic records to wang@bv.tum.de addressing to Prof. Xiaoxiang Zhu by May 10th 2017.

Contact person:

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