



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

Fusion of Social Media Text Messages and Remote Sensing Satellite Data

Description:

Over the last decade, the rapid development of social media has accumulated vast amount online data. Among them, online text messages, such as "Tweets", may carry useful information of the local environment, such as emergency events, land use and urban infrastructure type. They can be complementary to the 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 information retrieval techniques, such as infrastructure type classification, using massive online text messages together with remote sensing data. In the research, topic modeling of massive text messages will be exploited for extracting useful information from the text messages. Deep learning techniques and latent Dirichlet allocation (LDA) methods will be studied for the application on text messages. 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", Technical University of Munich (TUM) and German Aerospace Center (DLR), 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 with natural language processing is preferred
- Have or acquire during the research an in-depth knowledge of programming
- Creative and passionate

The scholarship is funded for a three-year period, with possible extension of up to 1 year. The monthly income is based on the DAAD scholarship standard. 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 m.schmitt@tum.de addressing to Prof. Xiaoxiang Zhu by May 10th 2017.

Contact person:

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