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DLR – DAAD – Fellowships

Fellowship No. 291

Research Area :	Space
Research Topic:	Synergistic use of Sentinel-1 and Sentinel-2 data for crop type and crop cycle mapping
DLR Institute:	Deutsches Fernerkundungsdatenzentrum (DFD), Oberpfaffenhofen
Position:	Doctoral Fellow
Openings:	1
Job Specification:	<p>Global Change, including climatic changes, a drastically increasing human population and alternating dietary habits, leads to considerable changes of our global food production systems. In the past decades, we have not only observed an expansion of agricultural land, but have also noticed changes towards intensification, and shifts in planted crop types and crop cycles. The novel European Sentinel earth observation satellites deliver, since recently, a ream of high resolution time series data that will allow us to assess and monitor the state and development of agricultural systems at unprecedented detail. Particularly the synergistic use of high spatial-temporal resolution radar and optical systems such as delivered by Sentinel-1 and Sentinel-2 will considerably improve the monitoring and quantification of agricultural activities at regional to global scales. The aim of this thesis is to explore the potential of the synergistic use of Sentinel-1 and Sentinel-2 data for crop extent, crop type and crop cycle mapping. The candidate shall develop robust approaches and respective large-area data products exploiting the full temporal, spatial and spectral information content of these satellite datasets to assess the current status and recent changes in agricultural land use at regional scale.</p>

- Required Qualification:** Master in Geosciences, Environmental Sciences, Geomatics, Geodesy or similar disciplines, with a strong background in remote sensing.
- Advantageous Skills:** Good programming skills (preferably Python, R, IDL, etc.), experience in handling big data, strong interest in applied geosciences.
- English competence:** Advanced knowledge (speaking, reading, and writing) required.
- Earliest Start Date:** As soon as possible
- Application Deadline:** Until position is filled
- Further Information:** <http://www.dlr.de>
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