



DLR – DAAD Fellowships

Fellowship No. 390

Research Area : Space

Research Topic: **Development and Demonstration of Novel Synthetic Aperture Radar (SAR) Acquisition Modes**

DLR Institute: Microwaves and Radar Institute (IHR), Radar Concepts Department, DLR Oberpfaffenhofen, Germany

Position: Postdoctoral Fellow

Openings: 1

Job Specification: The DLR Microwaves and Radar Institute contributes to the advancement of spaceborne sensors through the execution of long-term research programs. The research work of the Institute encompasses the conception and development of new synthetic aperture radar (SAR) techniques and systems, as well as the retrieval of information from SAR data for several science applications.

The newly formed NewSpace SAR research group focuses on disruptive and cost-effective SAR solutions for frequent and enhanced Earth monitoring. The group aims at establishing the foundation for a new SAR system design approach through the elaboration of theoretical models and the development of signal processing algorithms, thereby spreading the on-going NewSpace revolution to SAR remote sensing and posing the basis for future Earth observation missions that will yield remarkable societal benefits.

The postdoctoral fellow will investigate novel SAR acquisition modes – including frequency-modulated continuous-wave (FM-CW) operated SAR – through analyses, simulation and demonstration of the developed techniques, e.g., with drones.

The postdoctoral fellow will be encouraged to publish in peer-reviewed journals, apply for patents, present his/her work at international conferences.

Required Qualification: PhD in Electrical Engineering with emphasis on radar system design and/or signal processing. Demonstrated ability to publish in peer-review journals.

Analytical skills and basic programming experience in Python, IDL, MATLAB or equivalent.

Applicants should have good interpersonal and communication skills and should be able to work in an international and interdisciplinary environment, both independently and as part of a team.

Advantageous Skills: Knowledge of MIMO SAR, knowledge of SAR processing algorithms. Experience with FM-CW radar, experience with the processing of radar data acquired by drones.

English competence: The working language is English. A very good speaking/writing knowledge is required. See requirements on www.daad.de/dlr.

Earliest Start Date: 01.09.2019

Application Deadline: Until position filled

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

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