



DLR – DAAD Fellowships

Fellowship No. 478

Research Area : Space

Research Topic: **Coupled interior-atmosphere evolution of Venus and Venus-like exoplanets**

DLR Institute: Institute of Planetary Research, Department of Planetary Physics, DLR Berlin-Adlershof, Germany

Position: Postdoctoral Fellow

Openings: 1

Job Specification:

The Institute of Planetary Research carries out and supports research programs on the internal structure, formation and evolution of the planets, their moons, and asteroids and comets of our Solar System and other planetary systems. The dense atmosphere of Venus is unique among the terrestrial planets of our Solar System, and is directly linked to the planet's interior evolution. Such atmosphere is likely similar to the atmosphere of extrasolar planets in the so-called "Venus zone", a distance from the host star where a planet is most likely a Venus analog rather than an Earth analog. Therefore, understanding the interior-atmosphere coupling on Venus will provide valuable insights into processes relevant for a significant number of extrasolar planets.

The junior research group "Magmatic evolution and outgassing history of Mars and Venus predicted from coupled geodynamical-petrological modeling" within the Department of Planetary Physics at the DLR Institute of Planetary Research employs an interdisciplinary approach that combines large-scale geodynamical models of thermal evolution with petrological datasets to investigate the interior dynamics, subsurface environment, and outgassing history of Mars and Venus. The goal of this post doc project is to investigate the effects of partial melting and outgassing processes on the mantle dynamics, lithosphere

and crust of Venus and Venus-like exoplanets over their thermochemical history.

Required Qualification:

- PhD degree in physics, geosciences, applied mathematics, or similar disciplines
- Strong interest in planetary science
- Solid programming experience in high-level languages (C++, Fortran, Python or similar)
- Very good knowledge of fluid mechanics, continuum mechanics and heat transfer
- Excellent analytical skills
- Ability to work in a structured way both, independently and as part of a team

Advantageous Skills:

- Experience with geophysical or geodynamic modeling
- Track record of scientific publications in planetary science

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

Very good communication skills in English

Earliest Start Date: March 1st, 2021

Application Deadline: Until the position is filled

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

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