der Bundeswehr
Universität München

Research Assistant (m/f/d)
at the Institute of Space Technology and Space Applications
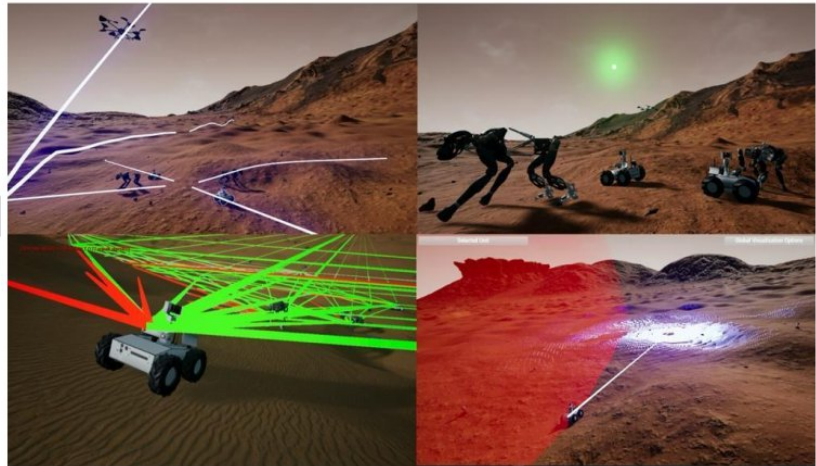**in the field of "Navigation and Mission Planning"**

within the DLR founded project VaMEx3-VRN

(German state regulated public service salary scale (TVöD 13)

for the next possible date in full-time limited until 31.08.2025.

The Universität der Bundeswehr München is firmly anchored in the national and international research landscape. As a campus university with modern facilities, it offers the best conditions for high-quality teaching and research.

The VaMEx3-VRN (Validated Robust Navigation Payload for Valles Marineris Explorer) project will develop a ground swarm mission concept for a Mars mission. This mission has as a remote goal to explore the Valles Marineris for water resources as well as possible biological traces. This exploration will be carried out by an autonomous swarm consisting of rovers, UAVs and crawlers. This mission concept serves as a basis for the planning of the VaMEx3 project network (altogether there are four projects within VaMEx3 with a total volume of approx. 5 M€) as well as for the planning of a larger demonstration campaign (~2026) in which the swarm is to be autonomously active in a test area for up to several weeks. In addition, a robust navigation system based on LiDAR and inertial sensors will be developed for a space-certified processing unit. This system will be actively tested on a UAV-based emulation platform throughout the project.

Your Tasks:

- Contribute to the development of a swarm mission concept for ground operations on Mars. You are the interface between all other VaMEx3 projects with respect to the mission concept.
- Additional focus is on the development and analysis of an inertial-optical navigation system for space-qualified hardware and the test, validation and demonstration of the navigation system in collaboration with all projects.

Qualification requirements:

- Completed scientific university education (master's/diploma) in the field of aerospace engineering, electrical engineering, geodesy, mathematics, physics or a comparable field of study
- Good knowledge in a relevant area: e.g. mission & system design for space missions, navigation, software development, LiDAR or visual odometry, etc.
- Knowledge of another of the above topics is an advantage
- good knowledge of English for working in an international environment and knowledge of German for administrative purposes is an advantage

What we offer:

- versatile and practice-oriented scientific projects in excellent research infrastructure
- Creative freedom in research in a dynamic and international team
- Possibility to join a PhD program as well as to found a company in the dtec.bw startup incubator
- Family-friendly campus with in-house kindergarten (parent initiative))
- Classification in salary group 13 is carried out in compliance with § 12 TVöD with regard to the actual activities to be performed and the fulfillment of the personal and collective agreement requirements.
- Parttime mobile work possible after consultation with the institute management

Employment can also be part-time if desired. The Universität der Bundeswehr München aims to increase the proportion of female scientists and employees; applications from women are expressly welcomed. Persons with handicaps will be given special consideration if they are equally qualified.

Are you interested?

Then please send your convincing application documents (cover letter, resume, references, certificates) by 31.08.2022 in PDF format by e-mail to:

antje.tucci@unibw.de

By submitting your application, you agree that your personal data may be stored, processed and forwarded to the departments involved in the application process for the purposes of the application. You can find more detailed information on data protection under the following link: Privacy policy

We look forward to receiving your application!