

Research Associate (PhD or Postdoc position)

The Chair of Lunar and Planetary Exploration at TUM invites applications for a Research Associate at the level of TV-L E13 (100%, public sector pay scale). The position is dedicated to the ESA-funded project MAGPIE. The expected starting date is September 2025, with an initial contract limited to 2 years and a possible extension.

About us

We are strongly dedicated to improving the understanding of the lunar water cycle, with many applications in the field of solar system science and exploration. To this end, we combine both numerical modelling and experimental methods and develop instrumentation to characterise water in situ on the lunar surface. We have recently acquired several high-profile grants to fund this research and are rapidly expanding.

Your tasks

In the ESA-funded project [MAGPIE](#), we are developing our Lunar Volatiles Scout (LVS) instrument for flight to the Moon on an ispace mission in 2029. Located on a rover, the LVS will drill into the lunar surface and heat the acquired sample to extract and analyse volatile species. The main objective of LVS is to search for water on the Moon. Your tasks will include project management and coordination with project partners, instrument development from TRL 5 to 8, test and characterisation of the instrument performance in a relevant environment (thermal-vacuum and drilling into ice-bearing regolith analogues), and scientific analysis and publication of the results.



Prototype of the Lunar Volatiles Scout instrument for the MAGPIE mission (image by TUM/P.Reiss)

Our offer

We offer the opportunity to conduct cutting-edge research in an academic environment at one of the top universities in Europe. You will work in a team of highly motivated researchers, in an ambitious project aiming towards a Moon mission. You will have the opportunity to engage in the international research community, present your work at international conferences, and publish in leading journals. Through its Graduate Centre and Talent Factory, TUM supports PhD students and Postdocs by providing a dedicated qualification program, as well as interdisciplinary collaboration and networking opportunities.

We look for

- a team player with the ability to work independently with an excellent master's (or doctoral) degree in aerospace, mechanical engineering, robotics, applied physics, planetary science, or related fields,
- practical experience in measurement techniques and experimental work on thermal-vacuum systems,
- proficiency in programming, numerical simulation, and data analysis,
- a strong passion and curiosity for space exploration and solar system science,
- excellent organisational and communicational skills in English (oral/writing).

Application

Please send your CV and relevant university and work certificates in one pdf-file to office.lpe@ed.tum.de. We look forward to receiving your application as soon as possible and no later than 15 July 2025.

As an equal opportunity employer, TUM explicitly encourages applications from women and all others who would bring additional diversity dimensions to the university. Preference will be given to disabled candidates with essentially the same qualifications.