



The  
**Institute of Fluid Mechanics and Heat Transfer**  
**Technische Universität Wien**  
invites applications for a

## **PhD Studentship**

starting October 1, 2018 for a duration of 3 years  
degree of occupation: 40 h/w

A fulltime position is available within a project of the Austrian Space Applications Programme (ASAP). The project contributes to the space experiment JEREMI expected to fly in 2019/2020. JEREMI is a joint Japanese-European fluid mechanics project on the heat transfer across thermocapillary free surfaces and on the fast accumulation of particles under microgravity conditions. The PhD student will work under the guidance of Prof. Kuhlmann (TU Wien), whose group is concerned with hydrodynamic instabilities, nonlinear dynamics, chaotic mixing and transport of particles.

### **Requirements:**

A diploma or master degree in physics or engineering is required. We are looking for a motivated scientist with a strong background in theoretical and computational fluid mechanics. Experience with hydrodynamic instabilities, scientific computing and excellent Matlab skills would be of great advantage.

### **Tasks:**

The tasks concern the numerical linear stability analysis of the flow in thermocapillary liquid bridges using Matlab. The focus will be on the effects of heat transfer, buoyancy and impurities on the critical Reynolds number, and on the effect of a variable index of refraction on optical measurements. The numerical code will be made accessible to others via a GUI. We offer the opportunity to submit a PhD thesis to TU Wien.

The annual salary for this post is €39.124,40 gross. Equally qualified women will be preferred in hiring.

Applications together with the cover letter, CV, all transcripts and photo must be sent to

Prof. Dr. Hendrik Kuhlmann, TU Wien, Getreidemarkt 9, A-1060  
Wien, [hendrik.kuhlmann@tuwien.ac.at](mailto:hendrik.kuhlmann@tuwien.ac.at)

Deadline for applications is May 31, 2018.