



Research Assistant (PhD Position) Arches and Avalanches in Particle-Laden Interfaces

Project

The project is financed by the Austrian Science Fund (FWF) and hosted by the Institute of Fluid Mechanics and Heat Transfer (www.isw.tugraz.at, Head: Prof. G. Brenn) of Graz University of Technology (TU Graz), Austria. The project is part of the research on fluid mechanics at the milli- and micro-meter scales, and more particularly on particle-laden interfaces. Such interfacial stabilization is frequently found in industrial products like Pickering emulsions or ultra-stable foams and is gaining interest for advanced liquid encapsulation. Despite considerable efforts in understanding the properties of these particle-laden interfaces, many questions remain open. Knowledge is especially sparse when it comes to strong and fast deformation of densely covered interfaces, which are the typical conditions encountered in most industrial applications. The project, led by Ass. Prof. Carole Planchette, aims to

- better probe the mechanical properties of these interfaces during strong compression and decompression using micro, meso and macroscopic measurements;
- relate the macroscopic interfacial properties to the ones of the individual microparticles by carefully engineering them.

Profile

Candidates must hold a Master degree in Physics or Mechanical Engineering or an equivalent degree. Knowledge in fluid and/or granular mechanics is appreciated. Proficiency in English (both oral and written) and good communication skills are required. We are looking for a highly driven candidate, showing adaptability and motivated to work in an international research team.

Offer

Full-time research assistant position at the TU Graz (Austria) in the international, multidisciplinary and dynamic working environment of the Institute of Fluid Mechanics and Heat Transfer, providing top-quality supervision and the possibility to graduate with a Doctorate in technical sciences from Graz University of Technology.

Start / Duration: November 1, 2020 / 3 years.

Deadline for application: October 1, 2020.

Salary according to Austrian collective agreement.

Contact

Ass.Prof. Dr. Carole Planchette
Email: sekr@fluidmech.tugraz.at
Tel.: +43 316 873-7341

Institute of Fluid Mechanics and Heat Transfer,
Graz University of Technology
Inffeldgasse 25/F, 8010 Graz, Austria