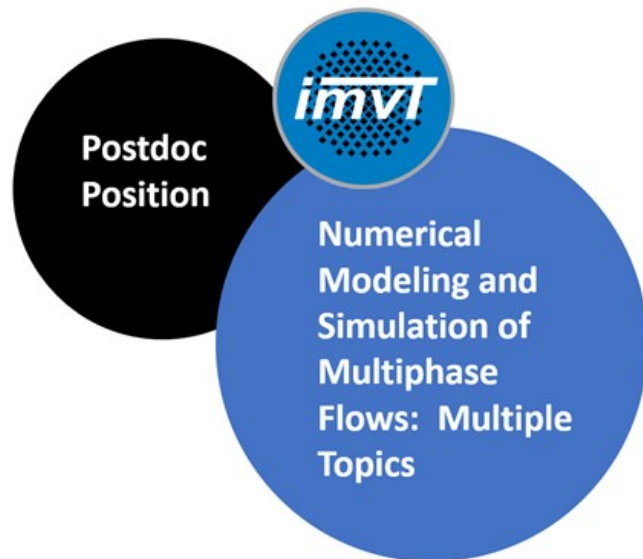


Prof. Carsten Mehring, Ph.D.  
Institut für Mechanische  
Verfahrenstechnik



The Institute of Mechanical Process Engineering (IMVT) at the University of Stuttgart has an opening for a fully-funded Postdoctoral Position in the general area of

**"Experimental Investigation and Numerical Modeling of Multiphase and Disperse Phase Flows"**

Our institute conducts theoretical and experimental research related to the behavior and the interaction between solid, particulate and fluidic (gas/liquid) substances or material systems, as they appear in the production of high-performance, high-value materials and products, in technical applications and processing plants, and in nature.

The candidate will be participating in various ongoing, well-progressed research projects, specifically in the area of:

1. Hydrodynamic and laser-induced cavitation and surface erosion in the presence of dissolved gases.
2. CFD-DEM simulation of particle deposition and fluid-structure interaction in liquid filtration.

The candidate will also actively support the writing of research proposals related to topics including membrane humidifiers and the use of wire meshes in PEM fuel-cell stacks. Naturally, a lively professional exchange with doctoral students of the institute is also expected.

(Experimental test-stands for the prescribed research projects are available.)

**Your Profile**

A doctoral degree in mechanical engineering, chemical engineering, aerospace engineering, process engineering or another related discipline. Good communication skills, highly motivated, with excellent grades and a strong background in theoretical and computational fluid mechanics. Experience with multiphase flows, phase-change processes, engineering use of PINNs and experimental measurement techniques are desired. Experience in Openfoam, ANSYS Fluent/CFX, Matlab/Simulink and Python is a plus. Excellent English skills and good German skills are required.

**We offer**

Salary for this position is based on the German TV-L system, salary group E13 (100%), and the individuals professional experience. It is expected

that the candidate actively supports education and the teaching mission of the institute.

The University of Stuttgart aims to increase the number of female employees. Qualified women are therefore especially encouraged to apply. Handicapped applicants will be preferred if applicability and qualification are equivalent.

### **How to Apply**

Applications with the usual documents (letter of motivation, CV, copies of degree diplomas, course transcripts from all previous institutions, list of publications, language test scores if applicable, list and contact information of references) should be sent by e-mail to [julija.hermann@imvt.uni-stuttgart.de](mailto:julija.hermann@imvt.uni-stuttgart.de) by June 16, 2025. For additional information, please visit our institute website at [www.imvt.uni-stuttgart.de](http://www.imvt.uni-stuttgart.de) or contact Julija Hermann (+49 711 685 85360).