The Institute of Mechanical Process Engineering (IMVT) at the University of Stuttgart has an opening for a fully-funded Ph.D. position in the area of "Numerical Simulation of Fluid-Structure Interactions and Deposition- and Transport-Processes in Liquid Filtration"

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.

Our institute has a long history in the area of separation technologies and specifically filtration. In context of liquid filtration, we are particularly interested in hydraulic systems. Here the working fluid can be negatively influenced by contaminants such as dirt and metal particles, water, dissolved gases or varnish. The envisioned project aims at investigating the filtration and separation of these contaminants by developing suitable physics-based numerical models for selected filter materials and under consideration of the structural loadings of these materials and filter systems.

Your Profile

A master degree in process engineering, mechanical engineering, or another related discipline. Good communication skills, highly motivated, with a strong background in structural mechanics and computational fluid mechanics. Experience with multiphase flows and particle dynamics and programming skills are desired. Experience in Openfoam, ANSYS Fluent/CFX and Matlab/Simulink is a plus. Excellent English skills and good German skills are required.

We offer

The position is fully funded for the duration of the Ph.D. studies. Salary for this position is € 3672 gross per month, based on the German TV-L, salary group E13 (100%). 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 carsten.mehring@imvt.uni-stuttgart.de by July 1, 2018. For additional information, please visit our institute website at www.imvt.uni-stuttgart.de or contact Prof. Carsten Mehring.