

Univ.-Prof. Dr.-Ing. Ulrich Steinseifer
Leiter Lehr- und Forschungsgebiet
Kardiovaskuläre Technik

Dr.rer.medic. Michael Neidlin

Institut für Angewandte Medizintechnik
Helmholtz Institut
Forckenbeckstraße 55
52074 Aachen
Deutschland
Telefon: +49 241 80-88616

neidlin@ame.rwth-aachen.de

28.09.2023

HiWi-Position WHB

10 – 12+ h/week

FSI simulations of cerebral artery hemodynamics

The Department of Cardiovascular Engineering is looking for a student assistant (10-12+ h/week) to join the Modeling & Simulation group and work on the project entitled "*Predicting the clinical outcome of endovascular aspiration using networked models of vascular hemodynamics and uncertainty quantification*".

This is a cooperation project with the Institute for Geometry and Applied Mathematics, and the Department for Diagnostic and Neurointerventional Radiology. It includes the development and evaluation of fluid-structure-interaction (FSI) models of cerebral blood flow during ischemic stroke.

Tasks:

- Develop, execute and analyze FSI models of vascular blood flow
- Validate simulations with existing experimental data
- Compare simulation data with 1-D reduced order models
- Visualize and present the results to mathematicians and clinicians

Requirements:

- Bachelor degree in mechanical engineering, CES or similar
- Knowledge of fluid mechanics and CFD
- Experience with ANSYS (CFX and/or Fluent) is an advantage
- Reliability and ability to work independently

What we offer:

- An interdisciplinary and highly innovative project in the field of digital medicine
- Experience in using the #1 simulation software
- A young and motivated team with great work environment

Please send your applications (CV and grades) to Michael Neidlin neidlin@ame.rwth-aachen.de. The position is to be filled immediately.