

University of Stuttgart

Professorship (W3) „Data-driven Simulation of Fluids on High-Performance Computers“

STUTTGART CENTER FOR SIMULATION SCIENCE | FACULTY 6 | AT THE EARLIEST CONVENIENCE

The new professorship aims at a unified perspective on data-integrated simulation science and high performance computing. New approaches combining advanced HPC and data-driven techniques for modeling, simulation, and analysis should be developed for innovative applications in multi-phase flow and/or porous media and in interdisciplinary collaboration between engineering, sciences, mathematics, and computer science. The professorship will be established at the University of Stuttgart in the context of the DFG-funded Cluster of Excellence EXC 2075 "Data-integrated Simulation Science". The professor will be jointly appointed by the Stuttgart Center for Simulation Science (SC SimTech) and the Faculty 6: Aerospace Engineering and Geodesy of the University of Stuttgart.

We are looking for an excellent scientist with international standing who will advance the field of data-driven simulation of fluids on high-performance computers in research and teaching and provide innovative contributions to several research foci of SC SimTech and the Faculty 6:

- Methods and software development for simulation on high performance computers
- Simulation on high performance computers
- Applications of data assimilation and model reduction
- Modeling with data-based methods
- Application of artificial intelligence and machine learning methods
- Massive parallel data-driven numerical prediction

The research in close collaboration with our international and increasingly diverse team should be tightly integrated into the project networks of the EXC SimTech (see www.simtech.uni-stuttgart.de) and should be supported by the acquisition of third-party funding and active involvement in further research projects of the University (like DFG-funded Collaborative Researcher Centers and Training Groups as well as Cyber Valley). We expect contributions to teaching in the Bachelor and Master programs of the Stuttgart Center for Simulation Science and Faculty 6 addressing also students from mathematics, computer science, and the sciences.

The requirements for employment listed in §47 and §50 Baden-Württemberg university law apply.

Please submit your application before September 10, 2021 by e-mail to jobs@simtech.uni-stuttgart.de with one PDF attachment comprising a curriculum vitae, academic degrees and certificates, full list of publications, research and teaching statements, three selected publications as well as the application form. Applications should be addressed to Prof. Dr. Thomas Ertl, Stuttgart Center for Simulation Science, University of Stuttgart, Pfaffenwaldring 5a, 70569 Stuttgart. Further information and the application form can be found here: www.simtech.uni-stuttgart.de/contact-jobs/. Please be aware of the risks regarding confidentiality and the integrity of your application contents when sending your application via unencrypted e-mail.

The University of Stuttgart has been awarded "family-friendly employer". Flexible working hours, regular childcare services, and family-networks allow for a better combination of professional and family life. The University of Stuttgart also offers a range of services to enhance social equity (www.uni-stuttgart.de/en/university/profile/equality-diversity). Additionally, a dual career program is in place to assist partners of those moving to Stuttgart: www.uni-stuttgart.de/dual-career-en. The University of Stuttgart is an equal opportunity employer. Applications from women are strongly encouraged. Severely challenged persons will be given preference in case of equal qualifications. Information on the collection of personal data in accordance with Article 13 of the GDPR can be found via the following link: www.uni-stuttgart.de/en/privacy-notice/job-application.