

Opening for a Doctoral Researcher Position in Visualization for Porous Media Research:

We are looking for a doctoral (PhD) researcher in the field of visualization on a 100% TVL13 position (limited term).

The position is funded by the DFG (the German Research Foundation) through the Collaborative Research Center "Interface-Driven Multi-Field Processes in Porous Media – Flow, Transport and Deformation". This CRC 1313 is an interdisciplinary research center at the University of Stuttgart with 18 individual research projects also involving many international partners.

More than 50 researchers collaborate to acquire the fundamental understanding of how interfaces affect flow, transport and deformation processes in porous-media systems. This involves the challenging tasks of quantifying how the dynamics of fluid-fluid and fluid-solid interfaces in porous-media systems are affected by pore geometry, heterogeneity and fractures, and of developing mathematical and computational models that describe the effective behavior of porous-media systems including the effects of interfaces that occur on much smaller spatial scales.

The visualization project D01 aims at developing visualization techniques for the interactive investigation of phenomena that occur in and around porous media. It particularly focuses on developing comparative feature-based visualization methods to relate data from different simulations and experiments.

We are looking for a PhD candidate who will develop specific visualization approaches for data resulting from projects within CRC, generalize them to be applicable to a wider class of use cases, and combine them into a flexible porous-media visualization framework that can be customized by the researcher. In the long term, the project aims at bridging the widely acknowledged gap between the techniques used by domain scientists and the approaches available from visualization research. An open source toolbox of advanced visual analysis techniques for porous-media problems will provide the foundation to support comparative analysis of benchmark results and detailed exploration of where and why deviations actually occur to gain deeper insights into the respective phenomena.

Starting date will be in consultation with the supervisor.

What we offer:

- Very well-equipped labs with direct supervision
- High scientific rigor
- An interdisciplinary team to work in with numerous collaboration opportunities
- Flexibility for own projects
- A professional workplace with state-of-the-art technologies to conduct research (e.g., graphics workstations, AR/VR hardware, Powerwall, lab space for empirical studies, eye tracking devices, 3D printing, motion tracking etc.)
- A structured doctoral qualification program. Part of CRC 1313 is an integrated research training group, where specific short courses, workshops and a summer school are organized to help the doctoral researchers in their training.

What you should offer:

- A genuine interest in scientific advances
- Scientific integrity, confidence to question authority (as "science is the belief in the ignorance of experts"), and the ability to stand up for good science
- Active participation in center activities (give presentations at seminars, follow courses, assist in the organization)
- Excellent MSc degree in computer science or a related field
- Experience in one or more of the following fields: visualization, computer graphics, human-computer interaction, empirical studies, or machine learning
- Excellent programming skills for research prototyping, strong motivation, and teamwork ability
- You should be prepared to supervise B.Sc./M.Sc. students
- Strong written and oral communication skills in English

Please do not hesitate to apply even if you do not check all the boxes.

Please submit your application (motivation letter, curriculum vitae, transcript of records, link to code examples (e.g., GitHub)) in **one single PDF file** and in an **additional PDF file** your master thesis (if not yet completed, recent report/paper/essay), via e-mail to jobs@visus.uni-stuttgart.de with the subject-line “[PhD-Position] Last name”. If you have any questions, do not hesitate to contact us.

Information on how we handle applicant data in accordance with Article 13 of the EU General Data Protection Regulation can be found at <https://www.uni-stuttgart.de/en/privacy-notice/job-application/>

The University of Stuttgart is committed to increasing its female-to-male staff ratio. Female candidates are therefore specifically invited to apply. Where qualifications are equal, persons with a severe disability will be given preference. As an employer, the University seeks to support the development of all its employees and helps them fulfill their individual potential. It advocates a good work/life balance and equal opportunities. The University of Stuttgart is a recognized “family-friendly employer” and a signatory to the Diversity Charter (“Charta der Vielfalt”) created by German organizations to promote diversity in business and society. Therefore we highly encourage applications from underrepresented groups, explicitly (but not exclusively) first-generation students, women, immigrants, parents, POC, LGBT*IQ.