PhD Student Position
(m/f/d, 100%, E 13 TV-L, temporary for the duration of 3 years)

The Cluster of Excellence "Data-Integrated Simulation Science" (EXC 2075) is an interdisciplinary research center with more than 200 scientists of different ages, gender identities, nationalities and different subject areas, jointly performing research towards a common goal: We target a new class of modeling and computational methods based on available data from various sources, in order to take the usability, precision and reliability of simulations to a new level. This is why we seek applicants from all parts of society. The open PhD student position is integrated into the Graduate School of the Cluster.

The position is fully paid and part of the project "Meta-Uncertainty in Bayesian Model Comparison" in the Junior-Research Group for Bayesian Statistics of Dr. Paul-Christian Bürkner at the Cluster of Excellence SimTech of the University of Stuttgart.

Your tasks:

- Development of statistical methods to quantify (meta-)uncertainty in Bayes model comparison procedures
- Execution of extensive simulations to evaluate the newly developed methods and compare them to competing approaches
- Development of software to implement the new methods in open-source programming languages such as R or Python
- Close cooperation with other scientists within the research group and at the Cluster of Excellence SimTech
- Publication of research results in international scientific journals and conference proceedings
- Active participation at national and international conferences

Your qualifications:

- Degree in a field with strong quantitative focus (e.g., mathematics, computer science, biology, or psychology)
- Strong interest in research questions focused on statistical modelling of complex data
- Previous experience in applied statistics, mathematical statistics, or machine learning
- Ideally previous experience in Bayesian statistics
- Previous experience in at least one programming language common in quantitative fields (e.g., R, Python, Julia, or C++)
- Previous experience in the probabilistic programming language Stan or another probabilistic programming language is an asset
- Proficient English skills (spoken and written); German skills are not required
- High amount of commitment, cognitive flexibility, as well as the ability to work both independently and in a team

We offer:

- An inspirational and supportive research environment at the Cluster of Excellence SimTech
- A nationally and internationally well-connected research group including close collaborations within the Stan Development Team
- Diverse and responsible tasks in a dynamic and friendly team
- Extensive opportunities to participate in training programs to support your first steps as an early career scientist
We explicitly encourage applications from female researchers, we are also welcoming to people of the LGBTQI* group. Also, if you have any disabilities and are interested to apply, please do not hesitate to answer to this call.

Please submit your complete application, including one-page motivation letter, academic CV, one letter of reference, as well as academic certificates and transcript of records, via paul.buerkner@simtech.uni-stuttgart.de until September 19th, 2021. If you have any questions regarding this application, please contact us via the above email-address.

We cannot reimburse any costs arising from the performance of job interviews. However, we offer interviews to be held online.

The information on the handling of application data in accordance with Art. 13 DS-GVO can be found via https://uni-stuttgart.de/datenschutz

The University of Stuttgart seeks to increase the number of women in areas, where they are underrepresented. Women are therefore expressly encouraged to apply. Severely handicapped persons are given priority if they have the same aptitude. Recruitment is carried out by the central administration. The University of Stuttgart and thus the Cluster of Excellence EXC 2075 strives for gender and diversity equality. We welcome applications from all backgrounds.