

## **RESEARCH ASSOCIATE / PHD STUDENT POSITION** (m/f/d, 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 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. The open PhD student position is fully funded and integrated into the Graduate School of the Cluster.

The position is part of the project "Intuitive Joint Priors for Bayesian Multilevel Models" 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 prior distributions for complex Bayesian models
- Execution of extensive simulation studies to evaluate the new prior distributions and compare them to competing methods
- Development of Software to implement the new methods in the programming language R
- 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:**

- Excellent Master's degree (or comparable) 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++)
- Ideally previous experience in the probabilistic programming language Stan or another probabilistic programming language
- Proficient English skills (spoken and written)
- High amount of commitment, 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

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-christian.buerkner@simtech.uni-stuttgart.de](mailto:paul-christian.buerkner@simtech.uni-stuttgart.de) **until December 20<sup>th</sup>, 2020**. 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.

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.