



TU Dortmund University is a dynamic research-oriented university with 17 departments in the natural and engineering sciences as well as social and cultural sciences. On our international campus, around 6,700 employees make a daily contribution to solving pressing questions of the present and the future. Openness and diversity characterize not only the collaboration in research and teaching, but also in technology and administration.

## PhD student in Uncertainty Quantification (Ref.-Nr. w85-23)

At the faculty of Mechanical Engineering, associated with the Chair for Reliability Engineering of Professor Matthias Faes of the TU Dortmund University, one scientific employee position is available starting at the earliest possible date for a period of three years. According to public tariff regulations, the salary is based on tariff group E13 TV-L. The position is full-time (100%). Employment in or reduction to part-time is possible in principle. The position to be filled in aimed at obtaining a “Doctor” title within a reasonable timeframe.

**YOUR TASKS:** The PhD research is situated in the quickly advancing field of “Imprecise Probabilities” and it is aimed at developing mathematical tools to efficiently propagate uncertainties through computationally expensive models. Your tasks will include performing basic scientific research in the domain of efficient uncertainty propagation with applications in mechanical engineering, regular presentation of research results at symposia and conferences. This research is to be performed in the framework of a funded DFG project.

**WE OFFER:** The possibility to perform cutting-edge research in a young scientific domain at the cross-roads of numerical simulation, applied mathematics, engineering and computational mechanics, with the possibility to obtain a PhD degree, a solid

supporting international network; strong scientific and personal development and training opportunities, to be a member of an international and dynamic team.

**OUR EXPECTED QUALIFICATIONS:** We are looking for an enthusiastic, self-motivated scientific employee with strong interests in simulation and advanced Uncertainty Quantification (UQ) methods, as well as data-driven techniques. A master's degree (with distinction) with a profound background in mechanical/ civil/electrical engineering, computer science or applied mathematics including numerical simulation techniques is required. Existing publications in scientific journals and awards are considered as a bonus, but not necessary to be considered.

### IDEAL ASSETS ARE:

- a solid engineering and/or mathematical background
- self-driven and independent research capabilities
- a natural team-player mindset
- ideally, experience in the field of uncertainty quantification
- demonstrated excellent skills in written and oral English
- a healthy dose of enthusiasm

We promote diversity and equal opportunities. Convince us with your personality and expertise. Applications from women will be given preferential treatment in accordance with the statutory regulations. It is pointed out that the application of suitable severely disabled persons is desired.

**If you are interested in this position, please submit your application documents, i.e. motivation letter, curriculum vitae, certificates, grade lists and 2 reference letters, by 15.10.2023 to:**

**Technische Universität Dortmund  
Fakultät Maschinenbau  
Lehrstuhl für Zuverlässigkeitstechnik  
Prof. Dr. Matthias Faes  
Leonhard-Euler-Straße 5  
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For further information, please do not hesitate to write to [matthias.faes@tu-dortmund.de](mailto:matthias.faes@tu-dortmund.de) or phone 0231/ 755-6830.