



With 6.700 employees in research, teaching and administration and its unique profile, TU Dortmund University shapes prospects for the future: the cooperation between engineering and natural science as well as social and cultural studies promotes both technological innovations and progress in knowledge and methodology, which not only the roughly 32.440 students benefit from.

PhD student in Uncertainty Quantification (m/f/d) (Ref.-Nr. w31-22)

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 (m/f/d) 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. 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 highly efficient numerical methods to perform Reliability Based Design Optimization. Your tasks will include performing basic scientific research in the domain of reliability-based design optimization with Operator Norms, regular presentation of research results at symposia and conferences, as well as in scientific journals, assumption teaching duties (4 SWS) in the broad field of reliability engineering and provide support of the Chair.

WE OFFER: The possibility to perform cutting-edge research in a 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 (m/f/d) 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.

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 explicitly note that applications of all sexes are welcome. Applications from women are favoured complying with legal regulation. We also underline that applications of severely disabled persons are welcome.

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, until 18 April 2022 to:

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Fakultät Maschinenbau
Lehrstuhl für Zuverlässigkeitstechnik
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For further information, please do not hesitate to write to matthias.faes@tu-dortmund.de or phone 0231/ 755-6830.