Technische Universität Braunschweig | Institut für Geomechanik und Geotechnik
Beethovenstraße 51b | 38106 Braunschweig | Deutschland

With around 15,000 students and 3,800 employees, the **Technische Universität Braunschweig** is one of Germany´s leading institutes of technology. It stands for strategic and performance-oriented thinking and acting, relevant research, committed teaching, and the successful transfer of knowledge and technologies to the economy and society. We consistently advocate for family friendliness and equal opportunities.

Our research focuses are mobility, engineering for health, metrology, and city of the future. Strong engineering and natural sciences are our core disciplines. These are closely interconnected with economics, social and educational sciences and humanities.

Our campus is located in the midst of one of the most research-intensive regions in Europe. We work successfully together with over 20 research institutions in our neighborhood as we do with our international partner universities.

Starting from August 17, 2026, the Institute of Geomechanics and Geotechnical Engineering (Institut für Geomechanik und Geotechnik, IGG) is looking for a

Research assistant/PhD student (m/f/d) for the research within the DFG-funded project

“Digital Sand: On the investigation of the mechanical behaviour of granular soils by linking in situ X-ray CT experiments and numerical simulations”

(EG 13 TV-L, full-time/part-time)

The position is to be filled on a fixed-term basis for a period of three years and comprises the research work within the above mentioned project which could be extended for further three years in case of the continuing funding by DFG. The position furthermore opens the opportunity to pursue a doctorate or further scientific qualification.

The Institute of Geomechanics and Geotechnical Engineering at TU Braunschweig is working on current geomechanical and geotechnical topics in fundamental and applied research with relevance to the building industry, to our society, and to our planet. In our research we address demands of environmental and climate protection, also considering sustainability and aspects of digitisation. Since the appointment to the new professorship in spring 2024, the institute is being reordered based on its experience in the fields of geotechnical measurements, onshore and offshore geotechnics, underground space construction, and deep geological nuclear waste repositories. Future research focuses on fundamental geomechanical topics from the point of view of materials science, on new foundation technologies as well as current topics of tunnel construction. Our research is aimed at a better understanding of material behaviour of all kinds of geomaterials as well as at the development of robust or resilient geotechnical structures and construction methods. To reach these goals, we apply and develop experimental and numerical methods. We highly estimate interdisciplinary and cross-disciplinary approaches, national and international collaborations and the publication of research results and data.

Your tasks

- You will carry out fundamental geotechnical research focusing on granular mechanics for a better

understanding of the material behaviour of granular soils on the particle scale
- The project comprises experimental investigations with imaging techniques (computed tomography, CT) and with (particle-based) numerical methods for a quantitative description of the interaction of thousands of sand grains during mechanical loading.
- You will publish research findings and participate in national and international conferences.

Your Qualifications

- You have a degree (Master's or equivalent) ideally in the field of *Civil Engineering* with focus on geotechnical engineering, hydraulic engineering or coastal protection or in the field of *Process engineering/Particle technology* or in the field of *physics*, ideally focussing on granular matter.
- You have very good knowledge of the German and English language.
- You have experiences in the field of *experimental research* (lab tests, measurement techniques) and in the field of *numerical simulations* (finite element method, particle based methods) or you are willing to become acquainted with new methods and fields of work.
- You are flexible and a team player.
- Your research is driven by curiosity and by an intrinsic motivation.
- You are aiming for a doctorate.

We offer

- Work on exciting future-oriented research topics in an inspiring work environment as part of the university community.
- A research environment with a well equipped geotechnical laboratory with experimental hall as well as collaborations with other research facilities.
- A vibrant campus life in an international atmosphere with lots of intercultural offers and international cooperations.
- Pay in accordance with the collective agreement TV-L (a special payment at the end of the year as well as a supplementary benefit in the form of a company pension, comparable to a company pension in the private sector) including 30 days' vacation per year.
- Flexible working and part-time options and a family-friendly university culture, awarded the "Family-friendly university" audit since 2007.
- Special continuing education programs for young scientists, a postdoc program, as well as other offerings from the Central Personnel Development Department and sports activities.

Further notes

We welcome applicants of all nationalities. At the same time, we encourage people with severe disabilities to apply. Applications from severely disabled persons will be given preference if they are equally qualified. Please attach a proof of disability to your application. We are also working on the fulfilment of the Central Equality Plan based on the Lower Saxony Equal Rights Act (*Niedersächsisches Gleichberechtigungsgesetz*—NGG) and strive to reduce under-representation in all areas and positions as defined by the NGG. Therefore, applications from woman are particularly welcome in this case.

The personal data will be stored for the purpose of processing the application. By submitting your application, you agree that your data may be stored and processed electronically for application purposes in compliance with the provisions of data protection law. Further information on data protection can be found in our data protection regulations at https://www.tu-braunschweig.de/datenschutzerklaerung-bewerbungen . Application costs cannot be reimbursed.

Questions and Answers

For more information, please call professor Dr.-Ing. habil. Marius Milatz via +49 531 391-62001 or send an email to marius.milatz@tu-braunschweig.de.

Deadline for applications is 15 May, 2026.

Are you interested? Please send your application preferably via email to Ms. Brigitte König-Stockburger: **igg@tu-braunschweig.de**

or via mail to

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