The Institute of Concrete Structures (IMB) at the Dresden University of Technology (TUD) has been teaching for over 100 years. Today, two professorships belong to the institute. The topics in teaching and research range from reinforced concrete in all its facets in experiment and simulation to supporting structures for wind turbines onshore and offshore, railway bridges for high-speed traffic and building monitoring. Numerous practical partners enrich the teaching on offer. Together, research results are transferred into real construction projects at the IMB. TUD embodies a university culture that is characterized by cosmopolitanism, mutual appreciation, thriving innovation and active participation. For TUD diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

At the Faculty of Civil Engineering, Institute of Concrete Structures, the Endowed Chair of Civil Engineering (Prof. Steffen Marx) is seeking to appoint a student as

**student assistant** (m/f/x) (4-19 h/week)

starting at the **earliest possible date** and limited until July 31, 2025, with the option for extension subject to the availability of resources. The period of employment is governed by the Fixed Term Research Contracts Act (WissZeitVG.)

**Tasks:** Academic support of the research group bridge construction within current research topics like AI-supported information extraction from images and plans, automated ML-based bridge design, and research and bridge data management. Possible tasks within these topics are:

1. Information extraction from images and plans
   - generating training datasets
   - training AI algorithms
2. Bridge design
   - literature research on bridge designs
   - implementing ML-algorithms for generating bridge designs
   - creating 2D drawings and 3D models
3. Research and data management
   - literature research on database concepts and technologies
   - design of a databases.

Specific tasks will be determined based on individual interests. If desired, the job can be the basis for a project and/or diploma thesis in later semesters.

**Requirements:**
- enrolled students at a university
- interest in scientific work
- independent work style
- interest in AI, machine learning, database design, and/or generative bridge design topics.
- Experience with Python and SQL is advantageous.

TU Dresden strives to employ more women in academia and research. We therefore expressly encourage women to apply. The University is a certified family-friendly university and offers a Dual Career Service. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment.

Please submit your detailed application with the usual documents by **August 31, 2023** (stamped arrival date of the university central mail service applies) to: TU Dresden, Fakultät Bauingenieurwesen, Institut für Massivbau, z. Hd. Herrn Cedric Eisermann, Helmholtzstr. 10,
01069 Dresden, Germany or via the TU Dresden SecureMail Portal https://securemail.tu-dresden.de by sending it as a single PDF file to cedric.eisermann@tu-dresden.de. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis