



Bachelor's/Master's thesis

Investigation of the material composition of prestressed fiber-reinforced polymer concrete

Student (m/f/d) Mechanical engineering, textile engineering, materials engineering, process engineering, aerospace engineering etc.

application deadline

Dec. 10, 2025

start

Mar. 01, 2026

duration

6 Months

workplace

Denkendorf

Job Description

The Institute for Textile and Fiber Technologies (ITFT) of Stuttgart University conducts research in the future-oriented field of pre-stressed fiber-reinforced polymer concrete for multi-axis components in machine tool construction. The base material, consisting of inorganic mineral particles and an epoxy resin matrix, is primarily characterized by its excellent damping properties, low thermal expansion, and low density. The low tensile strength of the material can be significantly increased by prestressed fiber reinforcement.

Your Tasks

- Determination of mechanical properties depending on the material composition of the polymer concrete
- Production of test specimens
- Conducting and statistical evaluation of mechanical tests

Your Qualifications

- Ability to work independently and on your own initiative
- Good academic performance
- Basic knowledge of CAD and programming
- Proficiency in MS Office
- Meticulous approach to work and manual dexterity
- Proficiency in written and spoken German and English

Our Offer

- Work in a motivated, interdisciplinary team
- Possibility of a further student assistant job
- In consultation, it is possible to work on the task remotely
- Payment depending on the employment format in consultation

The University of Stuttgart emphasizes the compatibility of private life, family and career as well as equal opportunities for persons of all genders. Disabled individuals are given preference in the case of equal suitability.

Contact

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