Chair of Building Technology and Climate Responsive Design
TUM School of Engineering and Design
Technical University of Munich

We´re looking for a student assistant (HiWi) to join our team

HiWi for Additive Manufacturing in Construction

About us

Within a DFG-funded Collaborative Research Centre "**AMC – Additive Manufacturing in Construction**", we´re researching the "**Integration of Passive and Active Functions in Additively Manufactured Construction Elements**". The aim is to develop and test additively manufactured building components, that integrate multiple passive and active functions to improve building operation and environmental quality. It explores the potential of AM of building components to incorporate different performance features. The components are developed and optimized through a **simulation-based parametric design process** for integrated performance functionalities. This research introduces methods for robust performance using AM building components due to the integration of passive and active functions in their design, fabrication, and construction process.

Requirements

- Bachelor´s degree in civil engineering, architecture, or similar
- Current study in M.Sc. Resource Efficient and Sustainable Building or similar
- First experiences with building simulation software (preferable TRNSYS, alternatively EnergyPlus or IDA ICE)
- First experiences with CAD-Tools (preferable Rhino)
- Ideally first experiences with algorithmic modeling (Grasshopper) and/or coding (Python)
- Team-oriented but also independent working
- Holistic and joined-up thinking

Tasks

- Thermodynamic building simulations
- Simulation-based parametric design process
- Design, manufacturing, and testing of prototypes
- Preparation and conduction of measurements

We offer

- 6 – 8 hours per week; Mini-Job
- Flexible working hours; remote office possible
- Start asap – 31.12.2024 (potential extension into 2025).
- Tight integration into current research project
- A young and small team (2 px, early 30s)
- Opportunity for master thesis

Application

We´re looking forward to receiving meaningful application documents. Please send them via e-mail to:

ahmad.nouman@tum.de

Supervision

Ahmad Saleem Nouman, M.Sc.
David Briels, M.Sc.
Prof. Dipl.-Ing. Thomas Auer

Technical University of Munich
TUM School of Engineering and Design
Chair of Building Technology and Climate Responsive Design

Arcisstraße 21
80333 München
Tel. +49 89 289 23815

www.arc.ed.tum.de/klima/