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

EINFACH (UM)BAUEN

Background

For the project einfach (um)bauen (follow-up project of einfach bauen), I am currently looking for a Hiwi to add to our team. The project focuses on low-threshold, inexpensive refurbishments that increase renovation rates rapidly and reduce heat consumption of residential buildings. Aim of the project is simplifying subsidy programs and reduce costs and effort of refurbishments.

For that purpose, representative buildings are identified from the building stock of the “Münchner Wohnen” housing company. For these representatives it is investigated which renovation measures meet the requirements for thermal comfort and energy demand reduction via thermal simulation (*TRNSYS*/*TRNLizard*) with an addition focus on realistic user behavior. Subsequently the results of the simulation are used as input for a life cycle assessment and life cost analysis, to determine the CO2 saving potential and costs of the different renovation measures. The project is in cooperation with the chairs of *Entwerfen und Konstruieren* and *Entwerfen, Umbau und Denkmalpflege*

Key Responsibilities

- Parametric thermal simulation of the building representatives (*TRNSYS18*/*TRNLizard*/*Grasshopper*)
- Documentation, analysis and post processing of thermal simulation data
- Develop scripts and applications for simulation data analysis (e.g. *PYTHON*)
- Research tasks regarding user behavior, performance gap and robust building service systems

Helpful qualifications:

- Experience with *TRNSYS* Simulation and *Grasshopper*
- Proficiency in programming languages e.g. *Python*
- Working independently and time-management skills

I am confident that this position will provide you with valuable experience and opportunities for professional development. I’m look forward to welcoming you to our team and working together on this exciting project.

Supervision

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