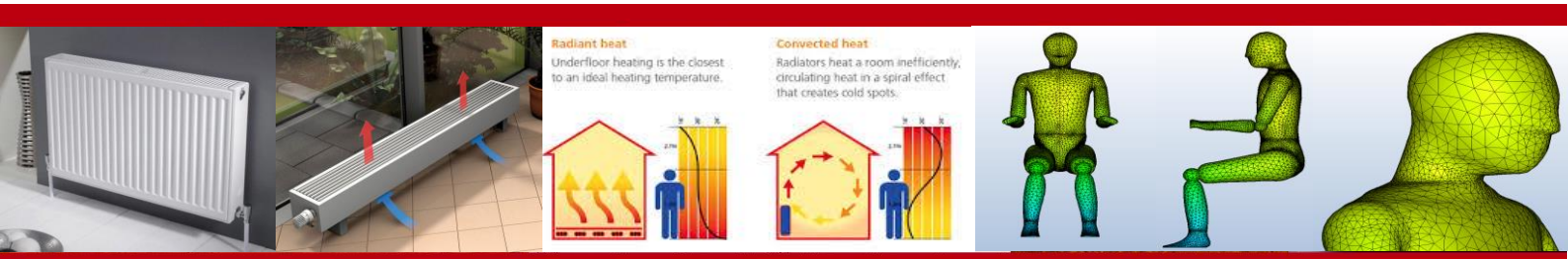
MASTER THESIS

CFD-Study: Evaluation of Heat Delivery Systems for Renovated Buildings based on Thermal Comfort Criteria



When renovating residential buildings, energy saving and human comfort must be ensured. With a focus on the thermal comfort theme, ***the building science group (fbta) of KIT*** develops experimental and CFD-simulation techniques in order to evaluate radiant and convective heating devices in buildings based on heating performance and thermal comfort indices.

This master thesis is part of the project "LowEx-Bestand". Together with the University of Freiburg, the Fraunhofer ISE and industry partners, KIT develops energy efficient solutions to heat renovated multi-family houses with heat pump systems.

Tasks:

- Familiarization with technical parameters of radiant or convective heating systems
- Extension of available CFD models
- Simulation of different types of radiant or convective heating systems in buildings
- Comparative evaluation of the thermal comfort

Requirements:

- Master student in mechanical engineering, energy engineering or similar
- Interest in learning CFD software
- Knowledge in the field of heating systems, ventilation, fluid mechanics is advantageous
- Microsoft office package

Your thesis will be supervised by Professor Andreas Wagner (Building Science Group - fbta).

Please contact Dr. Reza Safi Zadeh at reza.safi@kit.edu.

Please send your application with the following reference number to above email.

Reference number: **LX-2017-721**

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