

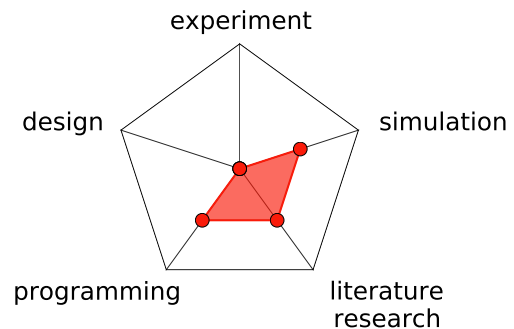
## Master-/Bachelorthesis:

### Not every Intelligence is smart - Selection of algorithms for efficiency increase in smart buildings

Artificial intelligence and machine learning are talked about a lot - yet these techniques are only applied in several smaller systems. To reach the goals of the energy transformation and save the climate the energy efficiency in office buildings needs to be increase drastically. Aside from advanced control algorithms and new energy systems, the detection and diagnosis of faults in buildings is unavoidable. Many new algorithms have been developed to do this - but which one is the best?

#### Your task:

- ▷ Survey the literature for promising algorithms
- ▷ Implement them in a testing environment
- ▷ Execute virtual experiments for comparison
- ▷ Develop usage scenarios for the tested solutions



#### Your profile:

- ▷ You study Mechanical Engineering, Energy technology or something similar
- ▷ You are interested in artificial intelligence and smart buildings
- ▷ You enjoy systematically developing own ideas
- ▷ You present your own solution to problems

#### Our profile:

The E.ON Energy Research Center at RWTH Aachen University deals with sustainable energy supply concepts that take account of technical feasibility as well as social and economic aspects. The reduction of primary energy consumption in buildings and an increase of indoor comfort are among the research tasks of the institute.

#### Contact person:

Gerrit Bode, M.Sc. - [gbode@eonerc.rwth-aachen.de](mailto:gbode@eonerc.rwth-aachen.de) - T +49 241 80-49796  
RWTH Aachen University - E.ON Energy Research Center  
Energy Efficient Buildings and Indoor Climate - Mathieustraße 10 - 52074 Aachen - Germany