### Abstract of the project

The current installation increase in weather dependent renewable energy systems (e.g. photovoltaic, wind) as well as the desired increment of automation in the electrical grid, have made accurate forecasting models (for both power generation and load) a necessity. For such reason, the Institute for Applied Computer Science at the KIT is currently researching novel data-driven forecasting approaches which could help the future developments of the electrical grid. The researched approaches can more specifically be divided into probabilistic forecasting (i.e. models able to quantify their forecast uncertainty) and structured forecasting (i.e. exploiting the information hidden in the structure underlying an energy system) methods.

### Tasks

Investigation and development of novel data-driven – probabilistic and/or structured - forecasting models on the basis of electrical and heat load data from KIT’s North Campus.

### Requirements

Knowledge in data-driven modelling as well as forecasting approaches is preferred but not required.

### Language Skills

Fluency in English

### Software Skills

Programming knowledge in MATLAB and/or R

### Other skills

No other requirements