



The **Institute of Power Engineering and Energy Economics** at Ulm University of Applied Sciences is seeking to fill the following full-time position in the Smart Grid Power & Controller Hardware in the Loop-Tests (XIL) project from 01.04.2023:

### Research Assistant (m/f/d)

As part of the eMpowerSYS research project, you will investigate newly developed software and hardware components for the future energy grid. For this purpose, simulation and test setups are set up in the Smart Grid Laboratory. The subsequent laboratory tests will validate whether the proposed solutions have reached the necessary level of maturity to be used in a field test. In the course of your work, you will deepen your knowledge of various approaches to the energy grid of the future and develop your skills in scientific work.

The **scope of duties** includes in particular:

- Analytical evaluation of use cases for the smart grid including consideration of risks and entry vectors into the future networked energy system.
- Creation of test strategy, test scenarios and test cases for the individual smart grid components and systems
- Development of a solution to automate the operational processes when carrying out test campaigns
- Connection of laboratory devices, simulations and measurement data acquisition to a central test control system
- Concept definition for the XIL environment of the Smart Grid Laboratory
- Specification of the XIL system components and interfaces
- Implementation of test scenarios with the resources of the Smart Grid Laboratory and the Energy Park
- Definition and development of essential components for XIL simulation with a focus on smart grid communication, simulation, optimisation and visualisation.
- Writing scientific documentation,
- Presentation of research results at conferences,
- Knowledge exchange with partners at home and abroad
- Project management and delegation of subtasks to students and student assistants

The **job** requires:

- Above-average Master's degree in power engineering, electrical engineering, computer science, systems engineering or a related subject
- Knowledge in systematic testing of electrical components
- Knowledge of creating simulations for XIL applications such as TyphoonHIL, SimuLink or similar environments.
- Basic programming knowledge preferably in Python
- Previous application of the Holistic Test Description is an advantage
- structured team-oriented way of working
- Language skills in German and English, one of these languages is business fluent

We offer:

- A modern university environment with innovative technical and engineering focal points
- A varied and responsible field of activity
- The opportunity for further education and training

The employment relationship is limited in time. Remuneration is paid according to your qualifications in accordance with TV-L in EG 13.

Ulm University of Applied Sciences actively promotes equal opportunities for all employees. Severely disabled people are given preference in the case of equal suitability.

Do you have any questions? Please don't hesitate to contact us: [Jennifer.weiher@thu.de](mailto:Jennifer.weiher@thu.de)

Are you interested? Then we look forward to receiving your application by 23.04.2023 via our application portal (ID no.: 14-2023)

**[APPLY HERE](#)**