Institute of New Energy Systems (InES)

The Institute of New Energy Systems (InES) is one out of three institutes for applied research at Technische Hochschule Ingolstadt (THI). The research activities of InES are focusing on the following fields of research: Bio-Energy Technology, Energy Systems Technology, Geothermal Energy, Networking & International Projects and Solar Energy Technology. Six professors, about 20 researchers and Ph.D. students carry out applied research projects in the field of renewable energy technologies. Bachelor and master students will find excellent career opportunities at the InES.

Bachelor- / Master Thesis / Student Assistant
Implementation of Artificial Intelligence in the energy sector

Research project / Background:

In the course of the digitalization, methods for the use of Artificial Intelligence (AI) in the field of renewable energy systems are applied. Some kinds of AI, like evolutional algorithms or artificial neuronal networks, are already used today for the automatically analysis of data flows, for predicting the typical producer and consumer profiles and for obtaining further optimization potential. AI can especially make an important contribution to the resource-efficient design of future energy systems in the field of fluctuating renewable energies. Starting at the earliest possible date, we are looking for a student who is eager to deal with the topic of the application of AI in the field of renewable energies.

Tasks:

• Research about available AI-applications in the field of renewable energies
• Research and comparative evaluation of suitable software tools
• Design of a self-learning or self-optimizing system for an application in the field of renewable energies

Necessary qualifications:

• Students specializing in engineering, mathematics, electrical engineering or comparable study programs
• Experience with the simulation tool MATLAB/Simulink or comparable tools
• Interest for and/or first experiences with machine/deep learning
• Initiative, ambitious team-player

We offer:

• Insights into research in the field of renewable energies and innovative energy systems
• Diverse tasks in a fascinating field of energy technologies
• Flexible working hours
• Participation in interesting research projects

Start: As soon as possible

Contact: abschlussarbeiten_ines@thi.de