

Helmholtz Call for Chinese Applicants Interested in Running for CSC 2021 Fellowship

Helmholtz Centre: Forschungszentrum Jülich GmbH – www.fz-juelich.de
Department/Institute: Institute of Energy and Climate Research - Energy Systems Engineering (IEK-10) https://www.fz-juelich.de/iek/iek-10/EN/Home/home_node.html
Supervising scientist: Prof. Dr.-Ing Andrea Benigni
University for registration or for a future degree: RWTH Aachen University
Research Field: Energy System
Position open for: PhD Student Sandwich PhD Student
Title of the research: Conception, Design and Development of Modern Power System Simulation and Control Solutions

More description of research topic:

IEK-10 focuses on the development of models and algorithms for simulation and optimization of decentralized, integrated energy systems. Such systems are characterized by high spatial and temporal variability of energy supply and demand as well as by a high degree of interdependency of material and energy flows. Research at IEK-10 aims to provide scalable and faster than real-time capable methods and tools which enable the energy-optimal, cost-efficient and safe design and operation of future energy systems.

Your work will focus on the development of innovative model-based control solutions for multi-physic energy systems. You will be also responsible of the implementation of the defined control methods and of their verification using Hardware in the Loop Methodologies.

Specific requirements:

Excellent university degree (Master) in Electrical / Electronic / Control Engineering or a comparable field
Strong mathematical background
Knowledge of modeling, preferably of power systems
Very good knowledge and experience in programming (e.g. Python, Matlab, C, C++)
Experiences in optimization, simulation and machine learning
Excellent ability for cooperative collaboration

Working Place: Forschungszentrum Jülich, Germany (near Cologne)

Earliest Start: September 2021

Language Requirement: Very good knowledge of English language, written and spoken. German language courses are organised in the context of our in-house training program and are free of charge.

Name and Address of the Supervisor: Forschungszentrum Jülich, Prof. Dr.-Ing. Andrea Benigni, Institute of Energy and Climate Research (IEK-10), 52425 Jülich, Germany, Prof. Dr.-Ing Andrea Benigni (a.benigni@fz-juelich.de)