

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 Systems
Position open for: Visiting Scholar **X** or Postdoc **X**
Title of the research: Decentralized Control of Energy Systems

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 decentralized control solutions for multi-physic energy systems. You will benefit of a state of art Hardware In the Loop laboratory for the evaluation of the defined methods.

Specific requirements:

PhD degree in Electrical Engineering or a related field with good final grade
Strong mathematical background
Strong publications record
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

Funding: CSC-scholarships will be increased by hosting institution (500 €month and costs for health, emergency-call and liability insurance (50 €))
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 and are free of charge.
Name and Address of the Supervisor: Forschungszentrum Jülich, Institute of Energy and Climate Research (IEK-10), 52425 Jülich, Germany
Prof. Dr.-Ing. Andrea Benigni (a.benigni@fz-juelich.de)