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DLR – DAAD Fellowships

Fellowship No. 598

Research Area : Energy

Research Topic: **Building energy diagnostics on district and urban scale**

DLR Institute: Institute of Solar Research, DLR Jülich

Position: Postdoctoral Fellow

Openings: 1

Job Specification: Heating and cooling of buildings are responsible for a large share of the world-wide energy consumption and CO₂ emissions. Therefore, countries around the world have set ambitious goals to reduce the energy consumption and CO₂ that are attributed to buildings. The EU wants to decarbonize the operation of its building stock within few decades which means that the energy efficiency must increase and renewable energy sources must be used for heating and cooling. In order to set the correct incentives and choose the right measures it is necessary to understand the current efficiency status of the existing buildings. In particular, on a local scale where decisions are made between centralized and decentralized supply or the best combination of efficiency measures and integration of renewables, accurate information about the buildings is required for tens and hundreds of buildings at the same time.

Our team is developing methods that make use of various open data sources (e.g. OpenStreetMap, census, city and state administration) and combines them with further information like energy consumption to describe energy use patterns, characterize buildings and determine performance indices at a district and city scale.

If you are enthusiastic about energy and building research, if you come with creative ideas on how to approach the challenges described above and if you like to work at the interface of method development and real-world applications, this is an opportunity for you.

Required Qualification: PhD (or equivalent) in engineering, architecture, geography, physics or another relevant field.

Advantageous Skills: Knowledge of QGIS, building energy modelling, building physics, programming (primarily Python), machine learning, parameter inference methods

English competence: See requirements on www.daad.de/dlr

Earliest Start Date: As soon as possible

Application Deadline: Until position filled

Further Information: <http://www.dlr.de>
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