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Code:

Project: RETABIT

Area: Energy Efficiency in Systems, Buildings and Communities Area

Area leader:

Group: Thermal Energy and Building Performance Group

Group leader: Dr. Jaume Salom Tormo

First Stage Researcher / Project Engineer

Software developer for building simulation

Thermal Energy and Building Performance Group

The applicant will work as a first stage research engineer in projects related to Net Zero Energy Buildings and Communities, DER (Distributed Energy Resources) integration and energy management systems in buildings. He/she will report to the Head of the Thermal Energy and Building Performance Group.

Description

The research will be embedded in the Thermal Energy and Building Performance Group which main research subject is the Integrated and Systemic approach for Zero Energy Communities and Buildings. The group's special focus is on the Mediterranean and other warm weather regions. The vision is to build an applied research group that contributes to accelerate the reduction of greenhouse gas emissions (GHG) through energy efficiency measures, production of clean energy, and integration of distributed renewable energy sources (RES).

The candidate will participate as software developer engineer in technical work of research projects in fields related with different levels of energy models for the built Environment and integration in computational tools. Activities where he/she will be involved are programming of codes applied to dynamic simulation of buildings integrated in smart infrastructures. Focus will be in residential building stock and USEM (Urban Scale Energy Models). Properly elaboration of reporting reports and collaboration in articles for scientific publication will be also carried out.

The candidate will participate in the RETABIT project that will develop a service platform to facilitate the multiple stakeholders involved in large-scale residential building retrofitting programmes to assess the status of buildings in an urban area and their potential for renovation, to evaluate possible renovation scenarios using multidimensional indicators, and to monitor the impact of their implementation over time. The creation of such platform conveys the development of data-driven models based on the integration of data from multiple domains, the design of services oriented to the diverse stakeholders involved in the retrofitting of the residential building stock, and their application to the design and monitoring of SECAPs in the case studies.

Requirements

We are looking for excellent and highly motivated candidates with a MSc degree in Computer Science, Geoinformation and/or Energy Engineering. Very Good programming skills with experience is essential: C++, Python, Data Bases, Dockers technology. Knowledge of GIS-tools (e.g QGIS, ARCGIS, others) or other dynamic building simulation / computational tools is highly valuable, especially PostGRES + GIS. Interest in urban planning and energy in buildings is also valuable.

We are looking for a methodical, excellent team-player and results-oriented candidate with good communication skills. Mastery of English on all levels is essential.

We offer

We offer the chance to become part of an exciting and consolidated team, with international recognition, working for the full length of the project. We also offer a research environment comprised of highly qualified and motivated professionals. Opportunities to develop a PhD linked to the project. Salaries will be paid in accordance with the IREC's salary policy, depending on the candidate's qualification and professional experience. Expected category is: First Stage Researcher / Project Engineer (R1).

Workplace. Barcelona / Tarragona (IREC facilities)

Application

Applicants should send a detailed CV and a letter of motivation to irecjobs@irec.cat.

The application deadline is 5th October 2021

Please indicate “**2021 –R1 – RETABIT**” in the subject