

Publish date April 23rd 2021

Ref. 34/2021, 35/2021, 36/2021

Code:

Project: PANDEMIES

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

Design & Model Resilient Communities to Mitigate Climate Change: Focus on Built Environment

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 candidates will participate as research/project 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 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 candidates will participate in the COMMIT20 project (funded by AGAUR under the PANDEMIES call). The ComMit-20 project aims establishing long and short term impacts of the COVID-19 pandemic situation regarding the energy consumption, changes in usage patterns and higher indoor environmental quality requirements in the built environment. The project will propose oriented adaptive measures, policies and recommendations to increase resilience of buildings and urban communities by means of integrating new found requirements in design and energy planning tools, and energy management systems.

Requirements

We are looking three candidates, two full-time and one part-time, for excellent and highly motivated candidates with a MSc degree in Building Physics Science, Energy Systems, Mechanical Engineer and/or Computer Science. Knowledge in heat and mass transfer phenomena, energy in buildings is essential. Knowledge of TRNSYS, R-Studio. GIS-tools or other dynamic building simulation / computational tools is highly valuable. Experience in computational simulation tools and programming is highly preferred. (C++, Python, etc). Advanced knowledge of HVAC systems is desirable.

We are looking for a methodical, excellent team-player and results-oriented candidates 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 (18 months period). We also offer a research environment comprised of highly qualified and motivated professionals. Salaries will be paid in accordance with the IREC's salary policy, depending on the candidate's qualification and professional experience. Expected category: R1.5 – First Stage Researcher / Project Engineer (R1).

Workplace. Barcelona (IREC facilities)

Application

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

The application deadline is 13th May

Please indicate “**2021 –R1 – Design Resilient Communities**” in the subject

L'Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR) han atorgat una ajuda Pandèmies 2020 per aquest projecte “ComMit-20 - 2020PANDE00116” amb el suport de la Secretaria d'Universitats i Recerca del departament d'Empresa i Coneixement de la Generalitat de Catalunya.