
Publish Date: 26/06/23

N. Ref.:72/2023

Area: Energy Efficiency in Systems, Buildings and Communities

Group: Thermal Energy and Building Performance

Head of Group:Jaume Salom Tormo

Position: Urban Modelling Software Developer

Description

The Thermal Energy and Building Performance Group announces a position of **High-skilled Recognised Researcher/Engineer (R2) in the field of Urban Modelling with significant knowledge and experience in Python developments**. The work will be embedded in the Thermal Energy and Building Performance Group which main research subject is the integrated and systemic approach towards positive energy buildings and communities. The group's vision is to investigate in solutions and strategies that accelerates the reduction of greenhouse gas emissions in the building sector through human-centred design, energy efficiency measures, integration and management of energy systems, particularly distributed renewable sources in the built environment as part of urban communities.

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, Local Energy Communities and UBEM (Urban Building Energy Models). The candidate will work in EU international projects within the subject of Retrofitting of Buildings, Positive Energy Districts and Local Energy Communities. Transferring knowledge on programming methods to other group's members will be a core task. Properly elaboration of reporting reports and collaboration in articles for scientific publication will be also carried out.

We offer.

We offer the chance to become part of an exciting and consolidated team, with international recognition, for developing cross-cutting projects in science and technology, oriented towards excellence. 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 maximum category: R2.2.2

Requirements

We are looking for a methodical and rigorous person with a scientific spirit, excellent team-player, teaching attitude and results-oriented candidate with high communication skills.

Essential:

- Degree in Mechanical / Energy Engineering / Computer Science
- Master Sciences Degree in Mechanical / Energy / Industrial Engineering / Computer Science
- At least 6 years of experience in professional/research projects in Energy Efficiency in Buildings
- At least 3 years of experience managing and supervising project technical teams (2-4 persons)
- Advanced knowledge in programming languages: Python
- Advanced knowledge in PostgreSQL+PostGis and GIS-tools (e.g, QGIS, ARCGIS)
- Advanced knowledge of CityGML information system and 3D City Database for CityGML
- Experience in data science tools: R, Python (NumPy, SciPy)
- Knowledge of Rhinoceros

Preferred:

- Advanced knowledge of HVAC systems, especially Heat Pumps
- Advanced knowledge in TRNSYS
- Knowledge of Indoor Environmental Quality assessment methods
- Knowledge in time series data analysis methods and tools
- Initiative in Research and Innovation
- Fluent English is essential