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**Ref. 55/2022**

**Code:**

**Project: Sport - Buildings**

**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 Research / Project Engineer – Sports Buildings Thermal Energy and Building Performance Group**

### **Description**

The Thermal Energy and Building Performance Group announces a position of Research Engineer (R1), specialized in Energy Modelling. The research 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 research engineer in technical work of research projects in fields related with different levels of energy models applied to Sports facilities. The activities will include measurement of energy and IEQ variables in facilities as well of calibration of models and their integration in computational tools. Activities where he/she will be involved are dynamic simulation of buildings and energy systems. We are looking for a methodical, rigorous, excellent team-player and results-oriented candidate with good communication skills. Motivation for research and pursuing a PhD degree is highly valuable. Mastery of English and Catalan on all levels is essential.

### **Requirements**

We are looking for a methodical, excellent team-player and results-oriented candidate with good communication skills.

#### Essential:

- Master Sciences Degree in Mechanical / Energy Engineering
- 1 year of experience in Energy Modelling
- Knowledge in heat and mass transfer phenomena and energy in buildings
- Knowledge of HVAC systems
- Experience in computational energy systems simulation tools
- Experience in TRNSYS
- Knowledge in time-series data analysis methods and tools

- Fluent English and Spanish are essential

Preferred:

- Experience in energy modelling tools for Buildings and Systems: Energy Plus, Modelica
- Experience in 3D GUI: Sketch Up, Rhino
- Experience in data science tools: R, Python (NumPy, SciPy)
- Experience in use and management of a revision control system: Git, SVN.
- Experience in experimental measurements, especially IEQ
- Knowledge of Indoor Environmental Quality assessment methods
- Initiative in Research and Innovation
- Synthesis and Scientific Reporting capabilities

**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 category: R1.8 – 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](mailto:irecjobs@irec.cat).

The application deadline is July, the 20<sup>th</sup> 2022.

Please indicate “**Ref. 55/2022 –Sport - Buildings**” in the subject