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Job Title	INESC TEC | RESEARCHER (AE2024-0287)
Department	CPES
Institution	INESC TEC PORTO, , Portugal
Date Posted	Aug. 1, 2024
Application Deadline	Aug. 25, 2024
Position Start Date	Jul. 25, 2024
Job Categories	Graduate Student
Academic Field(s)	Engineering - Other
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Job Description	

Research Opportunity

ENGINEERING - Thermal Modelling of Buildings and Storage Systems

Work description

In the framework of this project, a PCM-based thermal storage solution will be implemented to enhance energy efficiency at industrial warehouses.

The project will develop a thermal storage system (passive) in the negative cold storage zone at the warehouse, making a critical contribution to the increase of thermal inertia and allowing for better

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management of the cooling systems.

The project will also develop an energy management tool for the cooling systems, considering the local renewable energy production, the thermal behaviour of the negative cold storage system and the PCM storage system.

Academic Qualifications

Master in Mechanical Engineering, Electrical and Computer Engineering, or similar.

Minimum profile required

- Strong skills in modelling and simulation tools for building thermal analysis (e.g., Energy Plus, ESP-R).
- Ability to develop models for thermal storage management in buildings.
- Knowledge of phase change materials (PCM) and their application in cooling systems.
- Ability to develop predictive optimisation modules for building energy use and thermal storage.
- Knowledge of programming (e.g., Python).
- Exceptional written and oral communication skills in English and Portuguese (desirable).

Preference factors

- Professional experience in thermal energy modelling of buildings.
- Experience modelling thermal storage systems in tertiary buildings, specifically phase change materials (PCM).
- Experience in the application and evaluation of predictive optimisation modules.

Application Period

Since 25 Jul 2024 to 25 Aug 2024

Centre

Power and Energy Systems

Scientific Advisor

Zenaida Mourão

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What we offer

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- **International projects**
- The possibility of working in international projects with some of the most important companies in the field.
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- Mentoring with the best researchers in the fields of electrical and industrial engineering, bioengineering, information technology and physics.
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- Annual informal events, such as the multicultural party.

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Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

Portugal

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