

CALL FOR APPLICATIONS: RESEARCHER

Job/position/grant:

Job reference:	AE2022-0347 (InterStore - CPES) INESC TEC - Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência
Job/position/grant:	RESEARCHER
City:	Porto
Research field:	Main: ENGINEERING Sub: Electrical engineering

Job summary:

INESC TEC is accepting applications for 1 RESEARCHER job in the Electrical Engineering	
Project:	Interoperable open-source tools to enable hybridisation, utilisation, and monetisation of storage flexibility
Scientific Advisor:	Alexandre Lucas
Duration of the contract:	from 2023-01-01 to 2023-12-31, eventually renewable.
Location:	INESC TEC, Porto, Portugal

Job description:

Work Area: Electrical Engineering
Project overview: The topic focus is to deploy and demonstrate a set of interoperable Open-Source tools to integrate Distributed Energy Storage (DES) and Distributed Energy Resources (DER), to enable the hybridization, utilisation, and monetisation of storage flexibility, within a real-life environment. The project outcome will allow various DES, DER and several new generation Energy Management Systems (EMS) to be integrated by different stakeholders, while demonstrating the value added of asset's connection to common data space, reducing uncertainty and hence increasing acceptance by technology takers and final users.
Objectives: Contribute to the specification, design, development and implementation of digital tools in the energy area involving various assets /resources (e.g. electric vehicles, electric chargers, home batteries, local controllers, gateways, load monitoring equipment) Specification and definition of information exchanges between storage systems and EVs (in connected data spaces). Participation in pilot development to demonstrate defined use cases of hybrid battery systems. Battery management system implementation taking into account operational optimization. Data analysis and data collection (relational database, using e.g. PostgreSQL or similar). Use of energy management system (HEMS) and monitoring of resources (energy storage, EVs, appliances) adapting InescTec solutions. Participation in the preparation of use cases and services related to the digitalization of the electricity sector (electrification, e-mobility, distributed resources, smart homes, flexibility, IoT).

Academic Qualifications:	Bachelor in electrical engineering, computer science, energy systems or similar, with Masters (MSc) in the same area preferred, but not mandatory.
Minimum profile required:	Knowledge of battery technologies, optimization Knowledge of energy monitoring systems and control. Ability to analyse and process data from power systems. Knowledge of Python or C++ (or similar). Fluency in English (written and spoken).
Preference factors:	Knowledge of relational databases and APIs; Knowledge in the area of energy, energy transition and digitalization; Knowledge of electric energy storage systems; Knowledge of Energy Management Systems (HEMS or BEMS); Knowledge of application development (frontend and/or backend); Knowledge of interoperability; Knowledge of software or application testing procedures. Independent highly motivated; Proactive attitude; Teamwork spirit; Up to date with innovation trends in the energy sector; Interested in energy transition; Ability to solve problems; Ability to work on dynamic projects and tolerance to uncertainty; Communication and alignment skills with multidisciplinary teams.

Funding Entity:	funded by CE, project (reference 101096511)
Type of contract:	fixed-term contract
The hiring shall be governed by what is stipulated in the legislation in force regarding fixed-term employment contracts and by INESC TEC norms.	

Selection criteria:	The selection of the candidates will be based on the following criteria, in descending order of consideration: a) Relevant Curriculum in the concerned field of this tender b) Proven experience.
Selection Jury:	President of the Jury: Prof. Ricardo Jorge Bessa; Member: Prof. Alexandre Lucas; Member: Prof. Filipe Joel Soares;
Notification of results:	The results of the selection process will be sent to the interested by electronic mail.
Application period:	From 2022-11-03 to 2022-12-03
Application submission:	Electronic form filling in www.inesctec.pt in the section Work with Us