INESCTEC

CALL FOR APPLICATIONS: RESEARCHER

Job/position/grant:

Job reference:	AE2022-0114 (Plurianual_LA - 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 job in the Power Systems	
Project:	Financiamento Laboratório Associado
Scientific Advisor:	Luís Miguel Miranda
Start Date:	2022-04-22
Location:	INESC TEC, Porto, Portugal

Job description:

Work Area: Power Systems

Project overview: - Specification of high-performance power conversion systems according to the state of the art. - Design and specification of appropriate converters for smart inverters and chargers - Integration of smart management and control algorithms through embedded local systems for standalone (offline) and interconnected (online) operation. - Implementation of operating modes compatible with hierarchical and decentralized control systems to support the operation of the electrical distribution networks or energy communities. - Production, testing, validation, and demonstration of technological solutions developed for different projects.

Objectives: - Define requirements for power conversions systems for different types of application - Design, specification and implementation of power conversion systems (e.g., inverters, electric vehicle chargers, etc.) - Development of management and control algorithms based on centralized and distributed strategies - test and validation in laboratory and real demonstration environments

Academic Qualifications:	Bachelor or Master electrical and computer engineering; electronics; power electronics; energy systems; other related
Minimum profile required:	- Experience in the specification, design and implementation of power electronics systems, MPPT algorithms and battery management, and printed circuit boards - Experience in simulation (e.g., MATLAB/Simulink) and programming of real-time controllers for power conversion systems (e.g., Texas Instruments C2000). - Experience in the implementation and development of MODBUS (TCP/RTU), CAN, REST, etc. communications.
Preference factors:	- Experience in the development and testing of embedded systems based on Linux and programming (e.g., Python, C) - Experience in testing electronic converters in laboratory and field environments with thermography equipment, power/energy analysis, efficiency and electromagnetic compatibility - Fluency in English (spoken and written)

Funding Entity:	funded by National Funds through FCT - Portuguese Foundation for Science and Technology, I.P., project (reference LA/P/0063/2020
Type of contract:	Uncertain term contract
The hiring shall be governed by what is stipulated in the legislation in force regarding uncertain 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. David Emanuel Rua; Member: Prof. Louelson Costa; Member: Prof. Nayara Brandão de Freitas;
Notification of results:	The results of the selection process will be sent to the interested by electronic mail.
Application period:	From 2022-03-23 to 2022-04-05
Application submission:	Electronic form filling in www.inesctec.pt in the section Work with Us