CALL FOR APPLICATIONS: RESEARCHER

Job/position/grant:

Job reference:	AE2021-0285 (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,COMPUTER SCIENCE,MATHEMATICS
	Sub: Electrical engineering

Job summary:

INESC TEC is accepting applications for 1 job in the Power Systems - Planning & Reliability

Project:	Financiamento Laboratório Associado
Scientific Advisor:	Leonel Magalhães Carvalho
Duration of the contract:	from 2022-02-01 to 2023-01-31
Location:	INESC TEC, Porto, Portugal

Job description:

Work Area: Power Systems - Planning & Reliability

Project overview: The successful candidate will be expected to develop and test modules to support the long-term assessment of static and operational reserve of power systems operated in a multi-area context. With the development of these modules, innovative contributions to the state-of-the-art and, consequently, scientific publications are expected.

Objectives: The energy transition resulting from the decarbonization of Power Systems has been creating new challenges associated with the accurate quantification of long-term security of supply in systems with a high renewable component. At the same time, the growing interconnection between neighboring systems fosters the development of detailed models to simulate energy and reserve exchanges and capable of measuring the contribution of demand flexibility to security of supply as well as the impact of the growing demand associated with the consumption of electric vehicles. Given these challenges, the work to be carried out is focused on the development of models for considering weekly energy restrictions in the use of hydro power plants with reservoir and for defining energy and capacity exchanges between areas on an hourly basis considering the flow-based methodology. These modules will be embedded in a tool for assessing the adequacy of the static and operational reserve based on Sequential Monte Carlo Simulation.

Academic Qualifications:	Master degree in electrical and computer engineering, applied mathematics or computer science or informatics or similar.
Minimum profile required:	Experience coding in C++, Python or MATLAB.
Preference factors:	Experience in artificial intelligence and data analytics, particularly if applied to power systems. Fluency in English and Portuguese (written and spoken). Experience in the development of APIs via web services (e.g., Rest API). Experience with Docker.

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:	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. Leonel Magalhães Carvalho; Member: Prof. Manuel Matos; Member: Prof. Jorge Correia Pereira;
Notification of results:	The results of the selection process will be sent to the interested by electronic mail.
Application period:	From 2021-12-13 to 2022-01-15
Application submission:	Electronic form filling in www.inesctec.pt in the section Work with Us

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