CALL FOR APPLICATIONS: RESEARCHER

Job/position/grant:

Job reference:	AE2022-0103 (BigHPC - HASLAB)
	INESC TEC - Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência
Job/position/grant:	RESEARCHER
City:	Braga
Research field:	Main: COMPUTER SCIENCE
	Sub: Informatics

Job summary:

INESC TEC is accepting applications for 1 job in the Distributed Systems	
Project:	A Management Framework for Consolidated Big Data and HPC
Scientific Advisor:	João Tiago Paulo
Duration of the contract:	from 2022-04-15 to 2023-03-30, eventually renewable.
Location:	Braga

Job description:

Work Area: Distributed Systems

Project overview: The project has the following objectives: 1) Implementation and integration of the aforementioned storage solution, respective optimizations and control service. For this purpose, programming languages such as C++, Golang, or Python may be used; 2) Integration of the solution with monitoring platforms (e.g., Prometheus) and virtualization solutions (e.g., Singularity) available at HPC centers; 3) Experimental evaluation of the developed solution; 4) Participation in scientific publications and project reports.

Objectives: This project aims at designing and implementing a new generation of software-defined storage systems suitable for distributed HPC infrastructures. In more detail, the system to be developed must provide better quality of service for storage operations being done, by hundreds to thousands of applications, at the HPC infrastructure. This will involve the design and integration of new storage features (e.g., caching, scheduling, tiering). Furthermore, it will require an external service that optimizes the configuration of these features globally, i.e., by taking into account all the applications and resources available at the HPC infrastructure. The project will be carried out in collaboration with researchers from the advanced computing center TACC (Texas Advanced Computing Center).

Academic Qualifications:	Master's degree in computer science or related fields
Minimum profile required:	Knowledge in Distributed Systems and Storage Systems
Preference factors:	Experience with C++, Golang or Python programming languages; Experience with monitoring tools; Experience with containers.

Funding Entity:	cofunded by the ERDF - European Regional Development Fund, through the Operational Programme for Competitiveness and Internationalisation - COMPETE 2020 Programme and by National Funds through the FCT - Portuguese Foundation for Science and Technology, I.P. on the scope of the UT Austin Portugal Program on the scope of POCI-01-0247-FEDER-045924
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. João Tiago Paulo;
	Member: Prof. José Orlando Pereira;
	Member: Prof. Fábio André Coelho;
Notification of results:	The results of the selection process will be sent to the interested by electronic mail.
Application period:	From 2022-03-16 to 2022-03-29
Application submission:	Electronic form filling in www.inesctec.pt in the section Work with Us