CALL FOR APPLICATIONS: RESEARCHER

Job/position/grant:

Job reference:	AE2025-0048 (CRAS-Geral - CRAS)
	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 Robotics	
Scientific Advisor:	Alfredo Martins
Start Date:	2025-03-03
Location:	INESC TEC, Porto, Portugal

Job description:

Work Area: Robotics

Project overview: The work to be developed consists of research, development and engineering activities in sensory systems for robotic systems in aquatic environments. In particular, the aim is to develop biological sampling systems, eDNA collection in an underwater environment and integrate these systems into underwater and surface robots. Thus, the work plan includes the development of mechanical solutions, design and implementation of specific electronic components and subsystems, embedded software programming at both the subsystem and robot levels. It also includes the integration of the systems developed as well as other commercially available sensors in underwater and surface robots, both at the software and hardware level. In parallel to these R&D activities, the activity to be carried out includes not only carrying out validation experiments, field tests and contributing to the publication of the scientific results obtained.

Objectives: Develop autonomous eDNA sampling systems in aquatic environments.

Integration of multiple sensors in marine robotic systems as well as the development of robotic solutions for the study of ecosystem monitoring in aquatic environments.

Academic Qualifications:	Master's degree in Electrical Engineering or related field.
Minimum profile required:	Master's degree in Electrical Engineering and over 2 years of proven experience in developing robotic platforms in terms of hardware and software. Experience in developing water sampling and filtration systems. Participation in scientific projects and writing scientific documents.
Preference factors:	• Knowledge of C, C++ and Python programming languages, focused on applications for robotic systems.
	• Experience in hardware and firmware development, including PCB design and production, with proficiency in EDA tools such as KiCad.
	• Experience with programming microcontrollers, especially the STM32 family.
	• Experience with real-time operating systems, especially FreeRTOS.
	• Experience in developing embedded systems.
	• Experience in 3D modeling with CAD software, especially SolidWorks.
	• Skills in real-time and in-situ water sampling and filtration systems.
	• Development and implementation of mechanical and micro-hydraulic systems.
	• Knowledge in eDNA collection within the scope of scientific research projects.
	• Collaboration in multidisciplinary teams and with researchers from different scientific and technical areas.
	• Scientific publications in engineering in the area of ■■"eDNA sampling" in aquatic environments
	• Experience in field missions with robotic systems

Funding Entity:	
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.
Disability Incentive:	Candidates who present a degree of disability equal to or greater than 90% will benefit from an incentive (20) in the score of the CV Assessment.
	Candidates who present a degree of disability equal to or greater than 60% and less than 90% will also benefit from an incentive (10) in the score of the CV Assessment.
	Said score may, in these cases, exceed 100 points.
	Candidates must demonstrate the degree of disability during the application, namely through the submission of the Multi-Purpose Medical Certificate of Disability, issued in accordance with Decree-Law no. 202/96, of October 23 - currently in effect.
	Candidates must declare, in the application form, the type of disability used throughout the selection process, in order to proceed with the required adaptations.

Selection Jury:	President of the Jury: Diana Viegas;
	Member: Ana Paula Lima;
	Member: André Dias;
Notification of results:	The results of the selection process will be sent to the interested by electronic mail.
Application period:	From 2025-01-30 to 2025-02-12
Application submission:	Electronic form filling in www.inesctec.pt in the section Work with Us