

(BL67/2019_IST-ID)

CALL FOR 1 (one) RESEARCH FELLOWSHIP FOR MASTER

Applications are open for 1 (one) fellowship for Master, within the framework of project HARODE, PTDC/EEI-SII/4698/2014 (1801P.00566.1.01 HARODE / CC930403), financed by national funds through FCT/MCTES (PIDDAC), under the following conditions:

Scientific Area: Robotics

Admission Requirements: Master degree* in electrical and computer engineering, or equivalent.

*Applicants with foreign degrees shall have the degree recognized in Portugal, under the terms of Decree-Law nr. 66/2018, August 16th.

Workplan: Semantic mapping in service domestic robots

This grant is part of the FCT project Human-aware Service Robots for Domestic Environments (HARODE), which is focused on the research problems of deploying autonomous robots in domestic environments to perform tasks: integrating human-robot interaction; decision-making under uncertainty; perception; navigation; and object manipulation.

The research topic of this grant is semantic mapping, that is, the problem of perceiving and representing relevant aspects of a physical environment, such as locations of certain objects and of humans to interact with, as well as of dynamic obstacles (e.g. closed doors and moved furniture). In this studentship, it is expected to explore the capabilities of an onboard omnidirectional camera system and to develop methodologies and algorithms for the core computer vision tasks (namely: image segmentation, object recognition, and person detection).

The experimental part of the work will proceed in close contact with the SocRob@Home team (http://socrob_at_home.isr.tecnico.ulisboa.pt), with regular participation in international scientific robot competitions, such as RoboCup and RoCKIn.

Legislation and Regulations: Lei n.º 40/2004, de 18 de agosto (Estatuto do Bolseiro de Investigação Científica); Regulamento de Bolsas de Investigação da Fundação para a Ciência e a Tecnologia em vigor (<https://www.fct.pt/apoios/bolsas/docs/RegulamentoBolsasFCT2018.pdf>.); Regulamento de Bolsas de Investigação do IST-ID.

Workplace: The work will be developed at Institute for Systems and Robotics at Instituto Superior Técnico, under the scientific supervision of Dr. Pedro Miraldo.

Duration: The research fellowship(s) will have the duration of 6 months. It's expected to begin in April 2019, and may be eventually renewed.

Monthly maintenance allowance: According to the values for Research Fellowships awarded by FCT in Portugal (<http://www.fct.pt/apoios/bolsas/valores>), the amount of the monthly maintenance allowance is € 989.70, being the payment method an option of the Fellow by Wire Transfer/Check.

Selection methods: The selection methods will be the following: *Curriculum evaluation and individual interview*, with the respective weight of 50% each.

Composition of the selection Jury: Prof. Rodrigo Ventura, Prof. Pedro U. Lima, and Dr. Pedro Miraldo.

Announcement/ notification of the results: The final evaluation results will be communicated to all applicants by email.

Application deadline and formalization: The call is open from 12 until 25 March 2019.

It is mandatory to formalize applications with the submission of the following documents: B1 Form – Fellowship application (<http://ist-id.pt/documentos/bolsas-de-investigacao/>) *Curriculum Vitae*, *academic degree certificate and motivation letter*. Applications must be submitted to the email: rodrigo.ventura@isr.tecnico.ulisboa.pt