

(BL238/2023-IST-ID)

Scientific Initiation Studentships

Applications are open for 1 Scientific Initiation Studentships, within the framework of project (1801P.01089.1.01) RAMONES (101017808) - IST-ID, under the following conditions:

Scientific Area: Automation, Control, and Robotics

Admission Requirements:

- a) *To be enrolled at a professional higher technical course, at a bachelor degree, at an integrated master or master degree, or to have a bachelor degree and be enrolled at a course that does not award an academic degree and it is integrated in the educational project of a higher education institution, performed in association or cooperation with one or several R&D units;*

Workplan: Autonomous underwater gliders (AUGs) offer unique opportunities due to their low power consumption, which results in extremely high endurance, enabling long term autonomous missions. To facilitate high-level command and control of the celebrated Slocum G3 AUG (<http://www.teledynemarine.com/slocum-glider>), a so-called backseat driver is available, which provides low- and medium-level motion primitives. The main goal of this grant is to leverage the backseat driver to design and test, with hardware-in-the-loop simulations, more advanced and higher-level control algorithms, e.g. path-following. Pursuing project RAMONES objectives, the end goal is the development of cooperation techniques for a fleet of AUGs. The grantee will be integrated in the expert team of ocean and aerial robotics researchers at ISR-Lisboa, who will provide support for the necessary integrations for the design and implementation of the control algorithms. The work will leverage the existing DSOR group simulation framework (https://github.com/dsor-isr/farol_gazebo).

Legislation and Regulations: Statute of Scientific Research Fellow, approved by Law nr. 40/2004, of August 18, as worded by Decree-Law nr. 123/2019, of August 28; FCT Regulation for Research Studentships and Fellowships, available on <https://www.fct.pt/apoios/bolsas/docs/RegulamentoBolsasFCT2019.pdf> and <https://dre.pt/application/file/a/127230968>.

Workplace: The work will be developed at ISR of IST, under the scientific supervision of Doctor David Cabecinhas.

Duration: The research fellowship(s) will have the duration of 12 months. It's expected to begin in September 2023, and not be 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 €541,12 being the payment method an option of the Fellow by Wire Transfer.

Selection methods: The selection methods will be the following: *Curriculum evaluation (60%), previous experience with programming, ROS, and knowledge of modelling, control, and navigation techniques*, with the respective weight of 40%.

Composition of the selection Jury: Doutor David Alexandre Cabecinhas (n.º. mec. 4610), Professora Rita Maria Mendes de Almeida Correia da Cunha (n.º. mec. 5697), Professor Pedro Tiago Martins Batista (n.º. mec. 4388).

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

IST-ID

Associação do Instituto Superior Técnico
para a Investigação e Desenvolvimento

Application deadline and formalization: The call is open from September 11 until September 15, 2023.

It is mandatory to formalize applications with the submission of the following documents: i) B1 Form – Fellowship application (<https://ist-id.pt/concursos/bolsas/>); ii) *Curriculum Vitae*; iii) academic degree certificate, where applicable; iv) proof of enrollment at an academic degree course or at a course that does not award an academic degree; v) motivation letter;

Applications must be submitted to the email: dcabecinhas@isr.tecnico.ulisboa.pt