

(BL314/2024-IST-ID)

Scientific Initiation Studentships

Applications are open for 1 (one) Scientific Initiation Studentships, within the framework of projects 1801P.01209 – RAIECO, IST-ID, DRI/India/0699/, financed by national funds through FCT and 1801P.00160.1.01 ATIV ID PROF ANTÓNIO PASCOAL - IST-ID, under the following conditions:

Scientific Area: Automation, Control and Robotics (Automação, Controlo e Robótica)

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;*
- b) *not to exceed with this contract, including the possible renovations, an accumulated period of one year in this type of studentship, continuously or with interruptions;*
- c) *not to have held any other fellowship directly or indirectly funded by FCT.*

Workplan: Study, simulation, and computer-based implementation of advanced navigation systems for marine robots with applications to positioning in open environments, seabed contour following, and underwater docking operations. The theoretical work will focus on the use of linear and nonlinear filtering structures. Implementation of selected algorithms on a target computer will be done using C++ and the Robotic Operating System (ROS). Tests of selected algorithms will be performed using prototype marine robots that are property of ISR/IST.

Special qualifications: Good background in signals and systems, estimation, and control. Familiarization with the software tools required for systems implementation

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 the Institute for Systems and Robotics (ISR) of Instituto Superior under the joint scientific supervision of Prof. David Cabecinhas and Prof. António Pascoal.

Duration: The research fellowship will have the duration of 6 months. It's expected to begin in January 2025, and may be eventually renewed up to the maximum of 12 months, including the duration of the initial contract.

Monthly maintenance allowance: According to the values for Research Fellowships awarded by FCT in Portugal (https://www.fct.pt/wp-content/uploads/2024/02/Tabela-de-Valores-SMM_atualizacao-2024.pdf), the amount of the monthly maintenance allowance is € 601,12, being the payment method an option of the Fellow by Wire Transfer.

Selection methods: The selection methods will be the following: Curriculum evaluation (50%) and Technical and scientific knowledge in software engineering, control, and relevant technologies (50%)..

Composition of the selection Jury: Profs. David Cabecinhas, Rita Cunha, and António Pascoal.

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

Deadlines and procedures of complaint and appeal. A complaint may be lodged from the final decision within 15 working days, or an appeal to the Executive Board of IST-ID within 30 working days, both counted from the respective notification



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Application deadline and formalization: The call is open from December 23, 2024 until January 9, 2025

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;
- vi) declaration on honour that the applicant does not exceed with this contract, including the possible renovations, an accumulated period of one year in this type of studentship, continuously or with interruptions, and has not held any other fellowship directly or indirectly funded by FCT.

Applications must be submitted through the website: <https://welcome.isr.tecnico.ulisboa.pt/opportunities/>



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