

(BL287/2024-IST-ID)

Research Studentships (Master students)

Applications are open for one 1 Research Studentship, within the framework of project 1801P.01209 – RAIECO, IST-ID, **DRI/India/0699/**, financed by national funds through FCT under the following conditions:

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

Admission Requirements: *To be enrolled at an integrated master or a master degree course.*

Workplan: Study, simulation, and computer-based implementation of motion planning algorithms for single and multiple autonomous marine robots. The theoretical work will focus on the use of direct methods of optimal control for trajectory generation. Implementation of selected algorithms on target computers will be done using C++ and the Robotic Operating System (ROS). Tests of the algorithms will be performed using prototype marine robots that are property of ISR/IST. The successful completion of this workplan, followed by the thesis writing, will allow the student to complete his MSc degree while acquiring a solid background on advanced robotic systems design and testing.

Special qualifications: Solid background in signals and systems, control, and optimal control. Knowledge of 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. Rita Cunha and Prof. António Pascoal.

Duration: The research fellowship will have the duration of 6 months with the possibility of extension up to the maximum of 24 months, including the duration of the initial contract. It is expected to begin in January 2025.

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 € 990,98, being the payment method 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

Application deadline and formalization: The call is open from November 27 until December 10, 2024.



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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 (Master, Integrated Master); v) motivation letter;

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



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