(BL181/2024-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.*

Workplan: The selected MSc student will carry out research on navigation and control methods for autonomous marine robots with due account for the systems in charge of automatic docking with underwater stations for data transfer and energy recharging purposes. The key objectives to be achieved are twofold: i) system design and testing using realistic hardware-in-the-loop simulations and ii) system implementation on a Medusa-class hybrid underwater vehicle and a docking station, both developed previously at ISR/IST. In the process, the student will gain considerable insight into theoretical and practical issues of navigation and control supported by acoustic systems and attitude and heading reference units, as well as on the process of transitioning from the laboratory to the real world. The work culminates with the execution of a docking mission in a protected area. 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.

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 12 months. It is expected to begin in August 2024 and is not renewable.

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 (60%) and Technical and scientific knowledge in software engineering, control, and relevant technologies (40%).

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 July 24 until August 6, 2024.

fct Fundação para a Ciência e a Tecnologia

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/*

fct Fundação para a Ciência e a Tecnologia