(BL296/2025-IST-ID)

Up to 4 Scientific Initiation Studentships

Applications are open for up to 4 Scientific Initiation Studentship, within the framework of project Responsible.AI (Contrato nº 12 - IST-ID) financed by national funds PRR (Plano de Recuperação e Resiliência), through IAPMEI - Agência para a Competitividade e Inovação, under the following conditions:

Scientific Area: Electrical, Computer and Information Engineering
Admission Requirements: to be enrolled as a Bachelor, Master or Integrated Master student, at the starting date of the grant contract.

Workplan: the research activities will be organized according to the following PROFILES:

Profile 1 (PackBot): the candidate will develop computer vision, machine learning and control algorithms for a robot to perform packaging tasks. Human demonstrations will be used to generate data for learning. These data will encompass latent information concerning the physical properties of the manipulated objects (e.g. fragility) that are usually non included in packaging methods. In addition, reinforcement learning will be used to optimize object placing. Knowledge and experience in programming, robotics, machine learning methods is necessary.

Profile 2 (RAT4Autism-speech): this task is part of a project on robotic assisted therapy for children with autism. The goal is to explore speech signals during the therapy sessions, where the subjects' vocalizations may be used as biomarkers for help diagnosis and engagement during the session, in response to the therapist's and robot speech cues. Knowledge and experience in programming, robotics, machine learning methods, and signal processing is necessary.

Profile 3 (RAT4Autism-imitation): this task is part of a project on robotic assisted therapy for children with autism. The goal is to improve the current methods for assessing the subject's attention during the session. Due to the geometry of the camera/experimental setup, the gaze measurements are extremely noisy. Machine learning methods will be used to enhance those measurements to generate the adequate robot (inter)actions. Knowledge and experience in programming, robotics, machine learning methods is necessary.

Profile 4 (Humanoids Learning): the objective is to develop learning methods for humanoid robots acting on an indoors environment and interacting with humans. Different learning methods will be used, starting with VLA (visual, language, action) models trained from different general datasets. A collaboration with the Technical University of Munich is envisaged. Knowledge and experience in programming, robotics, machine learning methods is necessary.

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://dre.pt/application/file/a/127230968 .

Workplace: The work will be developed at VisLab – Institute for Systems and Robotics, LARSyS, under the scientific supervision of Professors José Santos-Victor, Alexandre Bernardino, and Catarina Barata

Duration: The research fellowship(s) will have the duration of 6 months. It's expected to begin in January 2026, 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/fct-atualizou-o-valor-das-bolsas-para-2025/), the amount of the monthly maintenance allowance is €651.12, being the payment method Wire Transfer.

Selection methods: The selection methods will be the following: Curriculum evaluation and motivation letter with the respective weight of 70/30%. An interview may be required to support the ranking of the candidates.

Composition of the selection Jury: Professors José Santos-Victor, Alexandre Bernardino, and Catarina Barata.

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

Deadlines and procedures of complaint and appeal. After notification of the provisional list of evaluation results, candidates have a period of 10 working days to, if they wish, make a statement at a preliminary hearing of interested parties, in accordance with Articles 121 et seq. of the Code of Administrative Procedure. The final decision will be made after analyzing the statements presented at the preliminary hearing of interested parties. The final decision may be appealed to the competition jury or to the President of IST-ID within 15 working days of notification

Application deadline and formalization: The call is open January 6 until January 19, 2026.

It is mandatory to formalize applications with the submission of the following documents:

i) B1 Form – Fellowship application (https://ist-id.pt/recursos-humanos/bolseiros/#documentos-relacionados);

ii) *Curriculum Vitae*;

iii) academic degree certificate, where applicable;

iv) proof of enrollment at an academic degree course (Master, Integrated Master or PhD) or at a course that does not award an academic degree;

v) motivation letter, indicating the preferred research activity PROFILE;

vi) A declaration on honour that the applicant does not exceed with this contract an accumulated period of two years in this type of studentship, continuously or with interruptions.

Applications must be submitted at https://welcome.isr.tecnico.ulisboa.pt/opportunities/