

1 Research Studentship for PhD students

Applications are open for 1 Research Studentship for PhD Students, 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 at a PhD, at the starting date of the grant contract.

Workplan: Effective and safe Human-Robot collaboration hinges on accurate, timely action anticipation by both actors. The utilization of electrophysiological signals, such as EEG, enables the direct integration of information from the central nervous system into robotic control and decision systems. To date, several research gaps on this topic remain, such as fast and accurate movement intention detection from EEG, limited ecological validity in robot training, and little integration with commercial robotic systems in HRI scenarios. To achieve this, this project aims to develop and conduct HRI experiments, through the use of state-of-the-art EEG processing algorithms and Deep Learning classifiers for the translation of action anticipation in real-time, which are then used to inform the decision systems of robotic manipulators. This project seeks to bridge the gap between research and industry, contributing to both academic understanding and practical applications in the field of robotics.

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 Institute for Systems and Robotics / LARSyS of Instituto Superior Técnico, under the scientific supervision of Doctor Plinio Moreno López.

Duration: The research fellowship will have the duration of 12 months. It's expected to begin in September 2024, and may be eventually renewable up to the maximum of 48 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 € 1259,64 €, being the payment method an option of the Fellow by Wire Transfer/Check.

Selection methods: The selection methods will be the following: Curriculum evaluation, namely background in the research area defined in the workplan, with the respective weight of 100%.

Composition of the selection Jury: Dr. Plinio Moreno López, and Professors José A. R. Santos-Victor and Athanasios Vourvopoulos.

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 1 until July 12, 2024.

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) official academic degree certificate;
- iv) proof of enrollment in a doctoral program;
- v) motivation letter.

Applications must be submitted to the email: plinio.lopez@tecnico.ulisboa.pt