

Research Studentships (for Master or Integrated Master students)

Applications are open for 1 (one) Research Studentship for Master students, within the framework of project RELISH - IST-ID co-financed by the European Commission (GA 101177427), under the following conditions:

Scientific Area: Biomedical Engineering

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

Workplan: The selected student will investigate real-time physiological and emotional responses to food-related stimuli in the general population, aiming to identify autonomic signatures that emerge before conscious emotional awareness. Through multimodal physiological sensing—including electrocardiography (ECG), electrogastrography (EGG), and electrodermal activity (EDA)—they will design a study that captures reactions to a curated set of video stimuli designed to elicit varying responses such as hunger, craving, anxiety, or aversion.

A central part of this work, which should fulfil the requirements of a MSc thesis in Biomedical engineering, involves the development and curation of a novel dataset of food-related video stimuli, designed to elicit a range of emotional and physiological responses such as craving, anxiety, and aversion. This dataset will be annotated for emotional and perceptual content, and both the dataset and the academic paper resulting from the study are expected to be submitted to a peer-reviewed conference in the fields of affective computing, biomedical engineering, or human-computer interaction.

The selected student's work will include the design and execution of a controlled user study, the collection and synchronisation of physiological signals, and the application of machine learning techniques to classify patterns of response to food cues. The ultimate goal is to assess the feasibility of real-time emotion detection based on physiological data. This will contribute to future just-in-time adaptive interventions (JITAI) that could be integrated into wearable devices to support cognitive behavioural therapy (CBT) and dialectical behaviour therapy (DBT)-based treatments, helping to interrupt restrictive eating behaviours just as they begin to form.

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; IST-ID Regulation for Research Studentships and Fellowships, available on <https://ist-id.pt/recursos-humanos/bolseiros/#documentos-relacionados>.

Workplace: The work will be developed at the Interactive Technologies Institute (ITI/LARSyS) of Instituto Superior Técnico, University of Lisbon, under the scientific supervision of Professor Augusto Emanuel Abreu Esteves.

Duration: The research fellowship(s) will have the duration of 12 months. It's expected to begin in 09/2025, and the contract might be renewable of a maximum of 18 months, including the duration of the initial contract.

Monthly maintenance allowance: the amount of the monthly maintenance allowance is € 1040,98, being the payment method of the Fellow by wire transfer.

Selection methods: The selection methods will be the following: *curriculum evaluation*, with the respective weight of 100%.

Composition of the selection Jury: Nuno Jardim Nunes, Full Professor, Instituto Superior Técnico; Augusto Emanuel Abreu Esteves, Assistant Professor, Instituto Superior Técnico; and Amâncio Lucas de Sousa Pereira, Assistant Researcher, Instituto Superior Técnico.

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, or an appeal to the Executive Board of IST-ID, within 15 working days counted from the respective notification.

Application deadline and formalization: The call is open from July 21 until July 25, 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 a Master or Integrated Master; v) motivation letter.

Applications must be submitted to the email: augusto.esteves@tecnico.ulisboa.pt