

## 1 Research Studentship for Master or Integrated Master student

Applications are open for one Research Studentship for Master or Integrated Master student, within the framework of project MIA-BREAST, reference 2022.04485.PTDC, financed by national funds through FCT/MCTES, under the following conditions:

**Scientific Area:** Intelligent Systems, Interaction and Multimedia (EEI-SII).

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

**Workplan:** The scholarship's work plan focuses on devising strategies to resolve ambiguities in medical diagnoses, particularly in assessing the severity of breast exam findings. The key goals include:

1. **Developing a Second Opinion Tool:** Creating a system that leverages a database of similar cases to provide radiologists with a second opinion, helping to draw more informed conclusions in ambiguous situations.
2. **Building a Dynamic Platform:** Designing a platform that enables radiologists to correct the model's classifications directly when disagreements arise. This will establish a continuous learning and training mechanism, including the ability to request additional images for ambiguous cases where decisions are challenging.
3. **Creating an Explainable Prototype:** Developing a prototype that can communicate and explain image features responsible for diagnostic ambiguities, fostering a clearer dialogue with radiologists.
4. **Testing Presentation Strategies:** Building a prototype to experiment with different sequences of case presentations to patients, tailored to the ambiguity levels of the findings.
5. **Introducing a "What If" Tool:** Developing a tool that analyzes potential outcomes in ambiguous cases, exploring adjustments such as modifications to lesion margins or shapes to achieve consensus in particularly challenging cases.

**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 of Instituto Superior Técnico, under the scientific supervision of professor Jacinto Nascimento and Dr. Francisco Calisto.

**Duration:** The research fellowship will have a duration of **3** months. It's expected to begin in **January/2025** and may be eventually renewed up to the maximum of 24 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](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 (40%), and an individual interview where the candidate must express knowledge about the use of Human Computer Interaction in the context of medical imaging diagnosis (60%)*. The jury will select the first two candidates for an interview, based on the curricular assessment.

**Composition of the selection Jury:** Professor Jacinto C. Nascimento, Dr. Carlos Santiago and Dr. Francisco Calisto.

**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 December 9 until December 20, 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) Proof of enrollment at an academic degree course (Master or Integrated Master);
- iv) motivation letter;

Applications must be submitted at <https://welcome.isr.tecnico.ulisboa.pt/scholarships/>



Fundação  
para a Ciência  
e a Tecnologia