

Two research Studentships for Master students

Applications are open for two Research Studentships, within the framework of project TWIN-STREAM (2025.00314.DT4ST), funded by national funds through IAPMEI/PRR (Plano de Recuperação e Resiliência - DigitalTwins4SmartTerritories, DT4ST), under the following conditions:

Scientific Area: Mechanical Engineering and Engineering Systems.

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

Workplan: Both grants will be carried out within the scope of the TWIN-STREAM project (TWIN-based STRategic TEchnologies for Improved WAter Management) and focused on estimating water in reservoirs. The specific objectives are:

1. To study and develop methods for segmenting water surfaces and estimating water quality using remote sensing data from Sentinel-2.
2. To develop machine learning algorithms for segmenting and predicting water bodies by combining Sentinel-2 imagery with other data sources, such as precipitation-driven inflows, hydrological models, dam discharges, and irrigation demands, while incorporating spatial and temporal constraints.

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 Instituto de Sistemas e Robótica of Instituto Superior Técnico (University of Lisbon), under the scientific supervision of Professor Carlos Santiago and Doctor Manuel Marques.

Duration: The research fellowship(s) will have a duration of 4 months. It's expected to begin in December 2025 and may be eventually renewed.

Monthly maintenance allowance: the amount of the monthly maintenance allowance is 1,040.98 €, being the payment method by Wire Transfer or cheque. The payment of Voluntary Social Security (until the 1st level) will be reimbursed by IST-ID.

Selection methods: The selection methods will be the following: i) Curriculum evaluation, ii) Programming skills and iii) Robotics/Computer Vision experience, with a respective weight of 40%/30%/30% (scores from 1 to 20 in each method). There may occur an individual interview, eliminatory in nature, to be used only if the previous selection methods are not enough for a decision.

Composition of the selection Jury: Professor Carlos Santiago (President), Doctor Lígia Pinto (member), Doctor Manuel Marques (member) and Ana Oliveira (substitute member).

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 December 16 until December 30, 2025.

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

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

- i) *Curriculum Vitae*;
- ii) Proof of enrollment on an academic degree course (Master or Integrated Master);
- iii) Motivation letter.

Applications must be sent to carlos.santiago@tecnico.ulisboa.pt