

**Research Studentships (PhD students)**

Applications are open for 1 Research Studentship, within the framework of project "ATE - Aliança para a Transição Energética", Agenda 56 - Projeto C644914747-00000023, financed by the European and Resilience Plan, under the following conditions:

**Scientific Area:** Informatics Engineering

**Admission Requirements:**

- a) *To be enrolled at a PhD.*

The candidate must also:

- a) Have very good English written and oral skills.
- b) Have very good knowledge of machine-learning methods, especially in the topic of Non-Intrusive Load Monitoring.
- c) Have very good programming skills in programming languages such as Python.
- d) Have previous research experience, particularly in the energy domain.

**Workplan:** The selected candidate will focus on developing and testing NILM techniques to identify EV charging events using data measured at the secondary substation level. The work will start with a short phase dedicated to understanding and preparing the available data, including basic cleaning, characterization of load patterns, and identification of periods where EV charging is likely present.

The next phase will explore and implement baseline NILM approaches suitable for aggregated transformer-level data, such as simple rule-based or threshold methods. These approaches will help establish reference performance and guide the design of more advanced models.

The core of the work will then focus on developing and evaluating machine-learning-based NILM methods tailored to the characteristics of secondary substation signals. This includes testing event-detection strategies and comparing different model families to understand their strengths and limitations in this specific context.

Finally, the selected candidate will consolidate the results by benchmarking the approaches, identifying which methods perform best, and documenting the full workflow. The last month will be dedicated to producing a short report and preparing the code, results, and recommendations for future work or integration into larger research activities.

**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 the Interactive Technologies Institute of LARSyS, under the scientific supervision of Dr. Lucas Pereira

**Duration:** The research fellowship will have the maximum duration of 6 months. It's expected to begin in January 2026. The fellowship is not renewable.

**Monthly maintenance allowance:** the amount of the monthly maintenance allowance is € 1309.64, being the payment method an option of the Fellow by Wire Transfer/Check.

**Selection methods:** The selection methods will be the following:

- a) Curriculum Vitae evaluation (70%)
- b) Motivation Letter (30%)

c) Individual Interview (as a tie-break procedure), to be conducted online

**Composition of the selection Jury:** Dr. Lucas Pereira (President), Prof. Hugo Morais, Prof. Augusto Esteves

**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 from 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) motivation letter;
- iv) academic degree certificate, where applicable;
- v) proof of enrollment at an academic degree course (PhD).

Applications must be submitted to the email: [luca.s.pereira@tecnico.ulisboa.pt](mailto:luca.s.pereira@tecnico.ulisboa.pt) (cc: [jobs@in3.tecnico.lisboa.pt](mailto:jobs@in3.tecnico.lisboa.pt)), with the subject [ATE] Application to BED.