

(BL119/2025-IST-ID)

Scientific Initiation Studentships

Applications are open for 2 Scientific Initiation Studentships, within the framework of project 1801P.01224.1.01 - BE.Neutral, contract nº 35, financed by the European Recovery and Resilience Plan, under the following conditions:

Scientific Area: Mechanical Engineering, Energy Management Engineering, Electrotechnical Engineering, Energy and Environment

Admission Requirements: *To be enrolled at a professional higher technical course, at a bachelor degree, at an integrated master or master degree, or to have a bachelor degree and be enrolled at a course that does not award an academic degree and it is integrated in the educational project of a higher education institution, performed in association or cooperation with one or several R&D units;*

Workplan: As part of the Beneutral project, 2 Scientific Initiation Studentships will be supported, each with the following workplan:

Profile a): this work focuses on developing a flexible simulation model to assess the environmental, mobility, and spatial impacts of introducing autonomous mobility solutions in urban areas. It involves defining deployment scenarios, collecting baseline data, and integrating autonomous mobility into agent-based or system dynamics models. Key metrics include congestion, emissions, public transport shifts, land use, and accessibility. Sensitivity analyses and validation through case studies aim to support data-driven decision-making by urban planners and mobility operators. Python programming skills are preferred.

Profile b): this work explores the integration of wireless charging systems into electric bus fleets to support sustainable urban mobility. A simulation tool will be developed to evaluate energy consumption, charging needs, and infrastructure design across deployment scenarios. The study aims to assess the environmental and operational impacts of these technologies, offering insights into their feasibility and benefits for public transport decarbonization. Matlab and Python programming skills are preferred.

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 IN+, Center for Innovation, Technology and Policy Research of IST-ID, under the scientific supervision of Professor Patricia Baptista and Professor Tiago Farias (Profile a) and of Professor Patricia Baptista (Profile b).

Duration: The research fellowships) will have the duration of 6 months. It's expected to begin in June 2025 and may be eventually renewed up to the duration of the project, with the limit of 12 months, including the duration of the initial contract.

Monthly maintenance allowance: the amount of the monthly maintenance allowance is 651,12 €, being the payment method of the Fellow by wire transfer.

Selection methods: The selection methods will be the following: Curriculum evaluation, with the respective assessment of curricular excellence (40%) and relevant experience for the project (40%). The best-ranked candidates in the curriculum evaluation will be invited to an individual interview, knowledge tests, others), with the respective weight of 20%.

Composition of the selection Jury: Prof. Patrícia Baptista, Prof. Tiago Farias and Dr. Ricardo Gomes.

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 May 7 until May 20, 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 an academic degree course or at a course that does not award an academic degree; v) motivation letter;

Applications must be submitted to the email: jobs@in3.tecnico.ulisboa.pt