

(BL275/2024-IST-ID)

Post-Doctoral Research Fellowships

Applications are open for one Post-Doctoral Research Fellowship, within the framework of 1801P.01224 – BE.Neutral-00000016/IST, contract nº 35 financed by the European and Resilience Plan, under the following conditions:

Scientific Area: Environment and Energy

Admission Requirements:

- a) *to hold a PhD degree obtained in the 3 years previously to the submission of the fellowship application;*
- b) *to have carried out the research work that led to the PhD degree in a different entity from the host institution of the fellowship;*
- c) *Not to exceed, with this fellowship contract, including the possible renovations, an accumulated period of 3 years in this type of fellowship, continuously or with interruptions;*
- d) *Not to have previously held a post-doctoral fellowship from IST-ID.*

Workplan: The selected candidates will join the 'Industrial Ecology and Sustainability' Laboratory, contributing to the development and demonstration of a Digital Twin designed for simulating urban environments and mobility systems. The work will support advancements in integrated sustainability management for cities. This work plan is part of the BE.NEUTRAL Agenda, which aims to position Portuguese cities and industries at the forefront of mobility innovation, focusing on carbon neutrality through a new generation of products and services. This agenda seeks to create transformative impacts on the economy, environment, and society. Within this framework, the candidates' research activities will include:

- a) Urban building energy modeling: model and assessment of retrofit solutions for the building stock for different neighborhoods.
- b) Application of optimization techniques to reduce carbon emissions considering retrofit solutions and cross-sectorial technologies (e.g. mobility services; energy storage)
- c) Impact assessment of intervention scenarios for integration into the Digital Twin and dashboard development

Qualifications and expertise: Candidates should hold a PhD degree in Mechanical, Civil, or Environmental Engineering or related fields. Knowledge in systems engineering and energy simulation related to buildings, is advantageous.

Programming Skills: Building Energy Modelling experience is beneficial.

Language Skills: Proficiency in written and spoken English is required.

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; Regulamento de Bolsas de Investigação da IST-ID, disponível em https://ist-id.pt/files/sites/43/regulamento-de-bolsas-da-ist_id-2.pdf.

Workplace: The work will be developed at IN+ - Center for Innovation, Technology, and Policy Research, Instituto Superior Técnico (Alameda and TagusPark), under the scientific supervision of Professor Paulo Ferrão and Professor Maria da Glória Gomes.



Duration: The research fellowship will have a duration of 12 months. It's expected to begin in January 2025 and it is not renewable.

Monthly maintenance allowance: the amount of the monthly maintenance allowance is € 1801, being the payment method of the Fellow by wire transfer.

Selection methods: The selection methods will be the following: curricular evaluation, with eventual interview to the candidates, for the candidates with the best curricular classification. In the curricular evaluation, the following factors will be evaluated: curricular excellence (50%) and relevant experience (50%). After evaluation, if necessary, an interview can be carried out to aid in the evaluation of candidates (in this case, the interview has a value of 25% and the curriculum evaluation 75%, respectively).

Composition of the selection Jury: Professor Paulo Ferrão, Professor Maria da Glória Gomes, Professor Patrícia Baptista

Announcement/ notification of the results: The final evaluation results will be communicated to all applicants by email.

Application deadline and formalization: The call is open from December 16 until December 30, 2024.

It is mandatory to formalize applications with the submission of the following documents: i) B1 Form – Fellowship application (<http://drh.tecnico.ulisboa.pt/bolseiros/formularios/>); ii) *Curriculum Vitae*; iii) academic degree certificate; iv) motivation letter; v) declaration on honour that the applicant does not exceed with this contract an accumulated period of three years in this type of fellowship, continuously or with interruptions, within the technological and scientific system, and that the research work that led to the PhD degree was carried out in a different entity from the host institution of the fellowship.

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