

(BL66/2024-IST-ID)

Scientific Initiation Studentships

Applications are open for **1** Scientific Initiation Studentship, within the framework of project **NGS - New Generation Storage**, 1801P.01313.1.01 NGS - Contrato Nº 58 - IST-ID, financed by *Plano de Recuperação e Resiliência* (PRR), under the following conditions:

Scientific Area: Sustainable Resource Management (*Gestão Sustentável de Recursos*)

Admission Requirements:

- a) to be enrolled at master degree at Instituto Superior Técnico and to meet the necessary conditions to attend the master's dissertation curricular unit in the first semester of 2023/24;
- b) to have not previously held a *stricto sensu* research grant (you may have held other scientific initiation studentship(s) in accordance with Article 7(9) of the IST-ID Research Grant Regulations, available at <https://ist-id.pt/concursos/bolsas/>).

Workplan: Batteries, critical raw materials and resilient EU energy transition

The path to energy transition will call for the massive deployment of a wide range of clean energy technologies, such as batteries, solar panels, wind turbines and fuel cells, which rely on critical and or strategic raw minerals. Future scenarios of energy transition consider a wide expansion of battery demand, particularly for electric vehicles, but also for stationary energy storage applications. The general objective of this project is to generate knowledge to understand the dynamics of critical materials for the energy transition in the EU, and in particular of batteries, thus contributing to economic development frameworks focused on resource efficiency, circularity, strategic autonomy and social equilibrium. More specific objectives include to prevent supply chain fragility of critical materials and to enhance proximity strategies, reuse and recycling of critical raw materials. To achieve the proposed objectives the proposed work includes developing stock flow models of batteries with relevant contributions to energy transition in the EU area. Considering the production and entry rates of devices in the EU and their expected end of life, the expected recycling needs and reuse rates of critical materials will be calculated. Estimates for future energy transition scenarios will also be included. ***The expected output of this fellowship is the completion and submission of a MSc thesis dissertation at IST.***

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 at IST-ID, available at <https://ist-id.pt/concursos/bolsas/>.

Workplace: The work will be developed at the Laboratory of Industrial Ecology and Sustainability of IN+ - Center for Innovation, Technology and Policy Research (<https://in3.dem.ist.utl.pt/>) - located at Instituto Superior Técnico (Alameda Campus), under the scientific supervision of Professor Marta Ramilo Abrantes and Professor Patrícia de Carvalho Baptista.

Duration: The research fellowship(s) will have the duration of 6 months. It is expected to begin in May 2024. Under positive evaluation of the work developed the fellowship is expected may be renewed up to the maximum of 12 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), the amount of the monthly maintenance allowance is **601,12 €**, being the payment method by wire transfer.

Selection methods: The candidates will be evaluated according to following criteria:



- a) Curriculum evaluation, 50%, including adequacy of BSc and MSc program to working plan, BSc final grade and MSc intermediate grade, number of completed curricular units of MSc, other activities and skills;
- b) Motivation letter, 20%;
- c) Individual interview conducted in English/Portuguese, 30%.

Composition of the selection jury: Professor Marta Ramilo Abrantes, Professor Patrícia Carvalho Baptista and Professor Maria de Fátima Grilo da Costa Montemor.

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

Time limits and procedures for prior hearings, complaints and appeals: Following communication of the provisional list of assessment results, candidates have a period of 10 working days to make their views known at the prior hearing of interested parties, under the terms of articles 121 et seq. of *Código do Procedimento Administrativo*. The final decision will be handed down after analysis of the opinions presented at the prior hearing of interested parties. The final decision may be appealed to the Jury or to the President of IST-ID, within 15 working days of notification.

Application deadline and formalization: The call is open from March 27 until April 10, 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) BSc certificate; iv) proof of enrollment at master degree at Instituto Superior Técnico with information about curricular units completed; v) motivation letter; vi) declaration on honor that the student has not previously held a research grant (the student may have held other research initiation grants, but not *stricto sensu* research grants).

Applications must be submitted to the email: marta.abrantes@tecnico.ulisboa.pt