

(BL5/2025_IST-ID)

Research Fellowship (“Bolsa de investigação BI”)

Applications are open for 1 Research Fellowship (“Bolsa de investigação BI”), within the framework of FCT project *Material’s Research with Radioactive Isotopes and Nuclear Techniques at ISOLDE-CERN 2024 (2024.00223.CERN InvMat @ ISOLDE)*, financed by national funds through FCT/MECI (INVESTIMENTO RE-C06-i06 – “Ciência Mais Capacitação” do PRR), under the following conditions:

Scientific Area: Tecnologias Nucleares e Proteção Radiológica (Departamento de Engenharia e Ciências Nucleares)

Admission Requirements:

- a) *Bachelor (or equivalent) degree in physics*
- b) *to be enrolled for a Master’s degree (but still without this degree), in a higher education institution.*
- c) *not to exceed with this contract, including possible renovations or previous fellowships of the same category, an accumulated period of two years in this type of fellowship, continuously or with interruptions.*

Workplan: Title: Participation in emission channeling and radiotracer photoluminescence experiments at ISOLDE/CERN and analysis of results

Aims: The primary task of the fellow will be the investigation of sodium-vacancy (NaV) colour centers in diamond, produced by means of ion implantation, within the scope of approved CERN experiment IS668 “Quantum colour centers in diamond studied by emission channeling with short-lived isotopes (EC-SLI) and radiotracer photoluminescence”. For that purpose, the fellow will participate in experimental campaigns (“beam times”) at the ISOLDE/CERN facility, followed by analysis of the experimental results. Within the scope of the fellowship, also participation in beam times related to other research topics may occur, under the leadership of our research group.

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://www.fct.pt/financiamento/programas-de-financiamento/bolsas/>, <https://dre.pt/application/conteudo/127238533> and IST-ID Research Grant Regulations, available at <https://ist-id.pt/concursos/bolsas/>.

Workplace: The work will be carried out at the Center for Nuclear Sciences and Technologies (C2TN), Technological and Nuclear Campus, of the Instituto Superior Técnico of the University of Lisbon, and at the Institute of Advanced Materials Physics, Nanotechnology and Photonics (IFIMUP) of the University of Porto, with possible trips to ISOLDE/CERN, under the scientific guidance of Doctor Ulrich Wahl (IST) and Prof. João Pedro Esteves de Araújo (UP).

Duration: The scholarship will last for 6 months, starting in February 2025. The scholarship contract may be extended until the end of the underlying research project *InvMat @ ISOLDE*, on 31.10.2025, if the work justifies it within the available budget.

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 € 990,98, bank transfer or check. If so, the candidate will be entitled to a monthly voluntary social security supplement of the amount in effect during the scholarship period.



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Selection methods: The selection methods will include a curriculum assessment. However, if the jury has doubts, an individual interview may be conducted via video call. The final evaluation will be weighted 75% on curriculum assessment and 25% on the individual interview. Practical qualification and experience in relevant work areas will be valued, especially in being a registered CERN User and performing experiments at the ISOLDE facility.

Composition of the selection Jury: Doutor João Guilherme Martins Correia, Doutor Ulrich Wahl, Prof. João Pedro Esteves de Araújo (external UP)

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 January 21 until February 3, 2025.

After communicating the provisional list of evaluation results, candidates have a period of 10 working days to, if they wish, express themselves at a prior 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 a prior hearing of interested parties. From the final decision, a complaint may be filed with the competition Jury, or an appeal may be made to the President of IST-ID, within 15 working days from the respective notification.

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

- i) B1 Form – Fellowship application “Candidatura bolsas de investigação” (<http://drh.tecnico.ulisboa.pt/bolseiros/formularios/>);
- ii) *Curriculum Vitae*;
- iii) academic Bachelor degree certificate or equivalent; in case of a foreign degree, proof of its registration and recognition by a Portuguese institution;
- iv) motivation letter;
- v) declaration on honor that the applicant does not exceed with this contract, including the possible renovations, an accumulated period of two years in this type of fellowship, continuously or with interruptions.

Applications must be submitted to the email: uwahl@ctn.tecnico.ulisboa.pt

Before signing a fellowship contract, it will be mandatory that the chosen candidate supplies in addition the following:

- i) proof of enrollment for an academic Master’s degree course.



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