

(BL32/2025-IST-ID)

Scientific Initiation Studentships

Applications are open for one Scientific Initiation Studentships, within the framework of project *PARADiSE – The plasma road to solar fuels* in *Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento (IST-ID)*, 1801P.0119.1.01 PTDC/FIS-PLA/1616/2021, financed by national funds through FCT/MCTES (PIDDAC) under the following conditions:

Scientific Area: Plasma Physics and Nuclear Fusion (FIS-PLA)

Admission Requirements:

- a) *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;*
- b) *not to exceed with this contract, including the possible renovations, an accumulated period of one year in this type of studentship, continuously or with interruptions;*
- c) *not to have held any other fellowship directly or indirectly funded by FCT.*

Workplan: This work will focus on validating plasma kinetics for the description of N₂ plasmas. It is part of an ongoing study aimed at characterizing plasmas for solar fuel production, where CO₂-N₂ and N₂-O₂ mixtures play a crucial role in the generation of high-energy-density molecules. The work will be conducted with the modeling tool LisbOn Kinetics (LoKI).

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/apoios/bolsas/docs/RegulamentoBolsasFCT2019.pdf> and <https://dre.pt/application/file/a/127230968>.

Workplace: The work will be developed at Institute for Plasmas and Nuclear Fusion (IPFN) under the scientific supervision of Dr. Tiago Silva.

Duration: The research fellowship will have the duration of 4 months and is expected to begin in March 2025. The grant contract can be renewed up to the maximum of 12 months, including the duration of the initial contract. When the academic degree or diploma is awarded during the term of the scholarship contract, the scholarship can be completed under the contractual terms established.

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 of the Fellow by wire transfer.

Selection methods: The selection methods will be the following: curriculum evaluation, motivation letter and interview, classified on a scale from 1 to 5, with the respective weights of 40%, 30% and 30%. Preferential factor: experience in modelling or laboratory work in N₂ plasmas.

Composition of the selection Jury: Vasco Guerra, Tiago Silva and Pedro Viegas



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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 within 15 working days, or an appeal to the Executive Board of IST-ID within 30 working days, both counted from the respective notification

Application deadline and formalization: The call is open from February 27 until March 13, 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; vi) declaration on honour that the applicant does not exceed with this contract, including the possible renovations, an accumulated period of one year in this type of studentship, continuously or with interruptions, and has not held any other fellowship directly or indirectly funded by FCT.

Applications must be submitted to the email: carla.reis@tecnico.ulisboa.pt



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