

Post-Doctoral Research Fellowships

Applications are open for 1 Post-Doctoral Research Fellowship(s), within the framework of project *The plasma road to solar fuels (PARADiSE)* from *Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento*, 1801P.01119,, financed by national funds through FCT/MCTES (PIDDAC), under the following conditions:

Scientific Area: Plasma physics

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-D.*

Workplan: PARADiSE consists of a thorough theoretical, modelling and experimental investigation of plasma decomposition of CO₂. It explores three research lines: extension of the prior results to plasma sources widely used for technological applications; fundamental studies on the influence of impurities and industrial gases; and study of plasma-surface interactions and product separation. The work will be done in close collaboration with several foreign laboratories, that will conduct a series of measurement campaigns tailored to the needs of the project. The workplan will always involve a modelling component, but it is flexible and can be tuned according to the interests and skills of the candidate, including experimental skills. More information on the project is available at the project website: <https://www.ipfn.tecnico.ulisboa.pt/paradise/>

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://dre.pt/application/file/a/127230968>.

Workplace: The work will be developed at the Institute of Plasmas and Nuclear Fusion (IPFN) of Instituto Superior Técnico, under the scientific supervision of Prof. Vasco Guerra.

Duration: The research fellowship(s) will have the duration of 12 months. It's expected to begin in September 2023, and may be eventually renewed up to the maximum of 18 months.

Monthly maintenance allowance: According to the values for Research Fellowships awarded by FCT in Portugal (<https://former.fct.pt/apoios/bolsas/valores>), the amount of the monthly maintenance allowance is €1741, being the payment method an option of the Fellow by Wire Transfer/Check.

Selection methods: The selection methods will be the following: curriculum evaluation, motivation letter and reference letters, classified on a scale from 1 to 5, with the respective weights of 40%, 30% and 30%. From this evaluation an intermediate classification is obtained and a shortlist of the candidates to interview, from which will be selected the candidate to be hired, is defined. The interviews will be held in English via zoom, and will be classified from 1 to 5. The final mark is obtained from a weighted average of the intermediate classification and the interview, with the respective weights of 60% and 40%.

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

Deadlines and procedures of complaint and appeal. A complaint may be lodged from the final decision within 10 working days, or an appeal to the Executive Board of IST-ID within 15 working days, both counted from the respective notification

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 May 22 until June 30, 2023.

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; 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; vi) two reference letters.

Applications must be submitted to the email: carla.reis@ist.utl.pt