

(BL57/2026-IST-ID)

Post-Doctoral Research Fellowships

Applications are open for 1 (one) Post-Doctoral Research Fellowship, within the framework of project (Models4Invasion/CEMAT), (2022.03060.PTDC), financed by national funds through FCT, under the following conditions:

Scientific Area: Applied Mathematics

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.*

Specific requirements:

- *The candidate **must have a PhD diploma or have defended his/her PhD by the time of application**, in Mathematics, Statistics, Biostatistics, Mathematical Biology, Computer Science, or a related field*
- *The candidate must have excellent verbal and written English communication skills*
- *He/she must have **at least two published papers** in applied mathematics to biology with methods from ordinary and partial differential equations, graph theory, dynamical systems and/or probability and statistics.*
- *He/she must have strong proficiency in Python and/or MATLAB, R or related software for data analysis and other software for statistical and mathematical modeling with evidence of codes in public repositories.*
- *He/she must have strong communication and collaboration skills, especially in a multidisciplinary team environment*
- *Previous modeling experience with the replicator equation and multi-species coexistence is a plus.*

Workplan: The main objective of the fellowship will be to study the effects of heterogeneity in spatially-structured or host-structured multi-species models governed by the replicator equation. The candidate(s) may also be required to develop computational and algorithmic platforms to link models to biological data. The project integrates dynamical systems, graph theory, linear algebra, optimization, calculus and probability and statistics.

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 CEMAT of Instituto Superior Tecnico, Lisbon, under the scientific supervision of Dr. Erida Gjini

Duration: The research fellowship(s) will have the duration of 7 months. It's expected to begin in (May/2026), and it is not renewable.



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Monthly maintenance allowance: According to the values for Research Fellowships awarded by FCT in Portugal (<https://www.fct.pt/fct-atualizou-o-valor-das-bolsas-para-2025>), the amount of the monthly maintenance allowance is € 1851, being the payment method an option of the Fellow by Wire Transfer/Check.

Selection methods: The selection methods will be the following: *Curriculum evaluation, including compatibility with project requirements (50%), individual interview to be held online (30%), motivation letter (10%) reference letter by a supervisor (10%).*

Composition of the selection Jury: Dr. Erida Gjini, Dr. Sten Madec, Dr. Thi Minh Thao Le

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 March 18 until March 31, 2026.

It is mandatory to formalize applications with the submission of the following documents: i) B1 Form – Fellowship application (<https://ist-id.pt/recursos-humanos/bolseiros/#documentos-relacionados>); 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) one reference from former advisor, vii) one chosen co-authored paper of his/hers that reflects compatibility with the advertised position.

Applications must be submitted to the email: erida.gjini@tecnico.ulisboa.pt



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