

(BL96/2023-IST-ID)

Research Studentship (for PhD students)

Applications are open for 1 (one) Research Studentship, within the framework of project/R&D institution (Mathematical modeling of invasion resistance in multispecies systems / *Center for Computational and Stochastic Mathematics, Instituto Superior Tecnico*), (2022.03060.PTDC), financed by national funds through FCT/MCTES (PIDDAC), under the following conditions:

Scientific Area: Applied Mathematics (mathematical modeling, biostatistics, numerical analysis, optimization)

Admission Requirements: *To be enrolled at a PhD.*

Workplan: *The candidate will build and apply mathematical models to multi-species ecosystems, linking biodiversity data from the literature with mathematical formalisms. The work will mainly involve development, simulation, study and analysis of ordinary differential equation systems, and application of dynamical systems theory, as well as biostatistical inference. Knowledge of the replicator equation and basics of evolutionary game theory or previous experience with bioinformatics is a plus. The ideal candidate will have excellent programming skills in Python/Matlab/Mathematica/R and be fluent in scientific communication in English, both reading, writing with clearly demonstrated previous experience. Academic background should include a formal Master degree in Mathematics/Physics/Computer Science/Computational Biology/Biomedical Engineering or related areas with relevance for the above. The ideal candidate will be highly motivated and independent, an excellent problem-solver, and work flexibly and productively as part of a team. He/she will show enthusiasm and curiosity to work at the interface between mathematics and biology, be a fast-learner and a creative and critical thinker.*

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 the Center for Computational and Stochastic Mathematics of Instituto Superior Tecnico, under the scientific supervision of Dr. Erida Gjini.

Duration: The research fellowship(s) will have the duration of 36 months. It's expected to begin in June 2023, and may be eventually renewed up to the maximum of 3 months.

Monthly maintenance allowance: According to the values for Research Fellowships awarded by FCT in Portugal (<http://www.fct.pt/apoios/bolsas/valores>), the amount of the monthly maintenance allowance is € 1199,64, being the payment method an option of the Fellow by Wire Transfer/Check. The PHD student will also benefit from Social Security Benefits.

Selection methods: The selection methods (and respective weights) will be the following: *Curriculum and background evaluation (30%), individual interview (can be presential or virtual, duration of 20 min) (30%), evaluation of written scientific work in English produced by the candidate individually or in collaboration (20%), motivation letter (10%), recommendation letters (10%).*

Composition of the selection Jury: Erida Gjini, Sten Madec, Jorge Tiago

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 April 6 until May 19, 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(s) certificates, where applicable; iv) proof of enrollment at an academic degree course; v) motivation letter; vi) recommendation letters (at least one, maximum 2); vii) an example of a written work by the candidate in English (Master thesis/paper/report/etc.) produced individually or as part of a team.

Questions regarding the application should be addressed to erida.gjini@tecnico.ulisboa.pt.

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