

CALL FOR AWARDING RESEARCH FELLOWSHIPS WITHIN PROJECT GRANTS AND R&D INSTITUTIONS

1 (one) Research Fellowship (BI) for Master Student

1 Research Fellowship(s) (BI) is(are) open at the **FCiências.ID – Associação para a Investigação e Desenvolvimento de Ciências**, for the project/R&D institution “Surfaces and interfaces of Soft Active Matter/CFTC”, EXPL/FIS-MAC/0406/2021”, funded by the Fundação para a Ciência e a Tecnologia, I.P./MCTES through national funds (PIDDAC) under the programme R&D Projects in All Scientific Domain, under the following conditions:

1. **Scientific Area:** Physics
2. **Requirements for admission:** Bachelor’s in Physics or similar areas.
3. **Additional optional skills and qualifications:** Previous experience in computational simulations
4. **Contracting requirements:** Presentation of the academic qualifications and/or diplomas. Enrolment in Master’s degree in Physics or similar.
5. **Work plan:** Active soft matter is a new class of nonequilibrium soft matter characterized by energy collection and conversion at the level of the individual particles. Examples include cells, microswimmers, and active colloids. The simplest class of Active Soft Matter is modelled, at the particle level, by a system of self-propelled active Brownian particles. Soft matter is bounded by surfaces and/or interfaces, the description of which requires the analysis of non-uniform systems. Even for scalar Active Soft Matter, surface and interfacial properties received little attention. Fundamental questions, such as how the interfacial fluctuations of systems at a phase transition depend on the activity or how the roughness of the edge of a growing film depends on its thickness, are still elusive. In this work, we will resort to extensive simulations of Active Brownian Particles undergoing a phase separation and apply rejection-free Kinetic Monte Carlo methods to a lattice model to access the relevant length and time scales. Specifically, we will study how the persistence length (related to the activity) affects the interface, measuring properties such as the power spectrum, roughness, and other structural characteristics of the interface.
6. **Legislation framework:** Research Fellowship Holder Statute, in accordance with Law 40/2004, of 18 August, in its current version and the FCT Regulation for Research Studentships and Fellowships, in its current version (Reg. 950/2019 published in DR on 16th December: <https://dre.pt/application/file/a/127230968>, or at the FCT website: <https://www.fct.pt/apoios/bolsas/regulamento.phtml.pt>), and FCiências.ID Fellowship Regulation, as approved on 12th May 2020 (available at [Regulamento de Bolsas de Investigação Científica da FCiências.ID](https://www.fct.pt/apoios/bolsas/regulamento.phtml.pt)).
7. **Place of work:** The work will be developed at the Centro de Física Teórica e Computacional – CFTC from the Faculdade de Ciências da Universidade de Lisboa under the scientific supervision of Professor Margarida Telo da Gama.
8. **Fellowship duration:** This position is initially opened for 5 months due to start in February 2023. The fellowship contract may be potentially renewed up to 12 months.
9. **Monthly allowance:** The fellowship amounts to € 875,98, according to [table values](#) of the fellowships awarded directly by the FCT, IP. The fellowship holder will have a personal accident insurance and can ensure the right to social security through adherence to the voluntary social insurance scheme, if not covered by any other social protection scheme, pursuant to *Código dos Regimes Contributivos do Sistema Previdencial de Segurança Social*. The fellowship will be paid monthly by bank transfer.

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10. **Evaluation and selection process:** Candidates will be assessed by CV (100%). Applicants whose application is scored with a final classification of less than 60 points are not eligible for granting a fellowship.
11. **Selection Committee:** Prof. Margarida Telo da Gama (President of the jury), Dr. Cristóvão de Sousa Dias (1st Member of the jury), Dr. Rodrigo Carlos Viana Coelho (2nd Member of the jury), Prof. Nuno Araújo (1st Alternate Member of the jury), Dr. Daniel Passos (2nd Alternate Member of the jury).
12. **Publication/notification of results:** All the candidates will be notified by e-mail, sent by the call holder, with the selection meeting minutes enclosed.
13. **Deadlines:** This call for applications is open from 24/01/2023 to 06/02/2023 .
14. **Application:** Applications should be sent via e-mail to mmgama@fc.ul.pt, by attaching the following documents:
- Curriculum vitae - **CV may be provided in PDF or through the [CIÊNCIAVITAE](#) system;**
 - Certificate of completion of previous degree;
 - and other documents considered relevant
15. **Time limits for the appeal procedure:** In case of negative decision, the candidates have 10 business days, after the date of announcement of the results of the candidates evaluation, to pronounce their disagreement in accordance with the *Código do Procedimento Administrativo*. Appeals against the final decision may be submitted to the Administration Board of FCIências.ID (fciencias.id@fciencias-id.pt) within 15 business days after the notification date

Note 1: The documents that prove the entitlement of the academic qualifications and diplomas, or the proof of registration in the academic degree or diploma requested on the call, can be dismissed during the application period and replaced by a declaration on their honour from the applicant. Their delivery is mandatory for the fellowship contractualization.

Note 2: Please note that - higher education degrees and diplomas awarded by foreign higher education institutions need to be recognized by a Portuguese higher education institution, pursuant to the [Decree-Law nr. 66/2018](#) (August 16) and the [Ministerial Order nr. 33/2019](#) (January 25). The presentation of the recognition certificate is mandatory for contract signature. More information can be obtained at: <https://www.dges.gov.pt/en/pagina/degree-and-diploma-recognition>.