

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

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

1 Research Fellowship(s) for R&D (BI) is(are) open at the **FCiências.ID – Associação para a Investigação e Desenvolvimento de Ciências**, for the project/R&D institution “Active skyrmions in liquid crystal-colloid composite media/Center for Theoretical and Computational Physics”, “PTDC/FISMAC/5689/2020”, “DOI: <https://doi.org/10.54499/PTDC/FIS-MAC/5689/2020>”, funded by the Fundação para a Ciência e a Tecnologia, I.P./MCTES through national funds (PIDDAC) under the programme Call for SR&TD Project Grants in All Scientific Domains - 2020, under the following conditions:

1. **Scientific Area:** Physics.
2. **Requirements for admission:** Bachelor’s in Physics or related areas.
3. **Additional optional skills and qualifications:** 1) Participation in internships in theoretical or computational Physics; 2) Average grade equal to or greater than 15 in the concluded courses in the BSc and MSc; 3) Intention to pursue a master’s thesis on a problem related to liquid crystals.
4. **Contracting requirements:** Presentation of the academic qualifications and/or diplomas. Enrolment in MSc in Physics or related areas
5. **Work plan:** Skyrmions are continuous but topologically protected localised configurations of the liquid crystal director field. Experiments revealed the presence of weak backflows associated with skyrmion motion, although no systematic study of this effect was pursued. Additionally, in future lab-on-a-chip applications, skyrmions will undoubtedly encounter shear flows and need to sense and respond to the flow autonomously. We will use an in-house code based on finite differences and lattice Boltzmann to simulate flowing skyrmions in graphics processing units (GPU). We will investigate how to control skyrmions with externally imposed flows in microfluidic devices and how these flows affect the structure of the skyrmions. The comparison with experiments is expected.
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.fciencias.id/regulamento)).
7. **Place of work:** The work will be developed at the Centro de Física Teórica e Computacional – CFTC, Faculdade de Ciências da Universidade de Lisboa under the scientific supervision of Professor Margarida Telo da Gama (supervisor) and Doctor Rodrigo Carlos Viana Coelho (co-supervisor).
8. **Fellowship duration:** This position is initially opened for 3 months due to start in April 2024. The fellowship contract may be potentially renewed for until the end of the project, in accordance with the provisions of Regulation of Research Fellowships from the Foundation for Science and Technology, I.P.
9. **Monthly allowance:** The fellowship amounts to € 990,98, 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 (70%) and motivation letter (30%). Applicants whose application is scored with a final classification of less than 70 points are not eligible for granting a fellowship.
11. **Selection Committee:** Doctor Cristóvão Dias (President), Prof. Nuno Araújo (effective member), Prof. José Maria Tavares (effective member), Doctor Mykola Tasinkevytch (alternate member), Prof. Paulo Ivo (alternate member).
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 01/03/2024 to 15/03/2024 .
14. **Application:** Applications should be sent via e-mail to rcvcoelho@fc.ul.pt, by attaching the following documents:
- Curriculum vitae, with the mandatory inclusion of the degrees obtained and/or to be attended, curricular units, respective grades;
 - Certificate of completion of previous degree ^{Note 1, 2};
 - Motivation letter.
15. **Processing of personal data:** FCIências.ID – Associação para a Investigação e Desenvolvimento de Ciências, as the controller under the General Data Protection Regulation, collects and processes the personal data requested in the context indicated in paragraph 14., under the legitimate interests in ensuring the award of the research fellowship to candidates with the indicated profile.
- The personal data will be kept for the period necessary for the execution of the purposes for which they are intended, being ensured the processing and protection in an appropriate and diligent way, the confidentiality and integrity of these data, through appropriate technical and organizational measures.
- Personal data may be transmitted to third parties, namely the entity funding the research project, solely for the purposes specifically established. In this sense, whenever the transfer of personal data to countries outside the European Union and/or international organizations is necessary, compliance with the applicable legal provisions is ensured.
- You have the right to request access, rectification, elimination, limitation of processing, the right to object and also data portability (if technically feasible), through the e-mail address: dp@fciencias-id.pt. You also have the right to lodge a complaint with the National Data Protection Commission.
- For more information, we recommend consulting the Internal Rules of Data Protection of FCIências.ID - Association for Research and Development of Sciences at <https://fciencias-id.pt/>.
16. **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 can be dismissed during the application period and replaced by a declaration on their honour from the applicant ([Minuta PT](#), [Minute EN](#)). Their delivery is mandatory for the fellowship contractualization.

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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>.