

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

### 1 Research Fellowship 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 “Admorph - Towards Adaptively Morphing Embedded Systems”, under Grant Agreement no. 871259, financed by European Union’s H2020 Research and Innovation Programme, under the following conditions:

1. **Scientific Area:** Informatics / Computer Science
2. **Requirements for admission:** Portuguese nationals, foreign and stateless persons may submit applications to this selection procedure, with a Bachelor Degree completed in Computer Science or Informatics.
3. **Additional optional skills and qualifications:** Enrolled in 2nd year of Master's degree in thesis work. Experience with Embedded Systems, Distributed Systems and Computer Security; Proven knowledge by passing curricular components in the areas of Internet of Things, Distributed Systems, Security and Reliable Software.
4. **Contracting requirements:** Presentation of the academic qualifications and/or diplomas. Enrollment in a Master degree in Computer Engineering, Informatics, Data Science or Information Security.
5. **Work plan:** Nowadays, there are more and more cyber attacks that aim to gain control of physical systems. The ADMORPH project aims to develop secure mechanisms for monitoring and processing the information from the sensors. In order to guarantee the confidentiality and integrity of the data processed by the controllers, security measures are required that are mainly based on cryptographic techniques and that implement secure processing zones. Many of the public key cryptographic standards that have been developed recently, especially after the NIST call in 2018, take into account concerns for use in devices with limitations either at the level of processing, storage and power consumption. In this research fellowship we aim to design a secure processing solution that can be installed in control systems similar to the systems present in robots or autonomous cars. The objectives of this work plan include: 1) To analyse the various cryptography techniques and their requirements; 2) To study Trusted Execution Environment solutions; 3) To design/study an architecture for a Trusted Execution Environment that will provide security mechanisms for the monitors' execution, in order to guarantee that the execution of the monitoring system remains secure and unassailable; 4) Writing the Thesis. This work plan intends to contribute to Task 2.4 within WP2.
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 16<sup>th</sup> 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 12<sup>th</sup> May 2020 (available at [Regulamento de Bolsas de Investigação Científica da FCiências.ID](#)).
7. **Place of work:** The work will be developed at the Research Center LASIGE, in Faculty of Sciences, University of Lisbon, Campo Grande, Lisbon, under the scientific supervision of Professor José Manuel da Silva Cecílio.
8. **Fellowship duration:** This position is initially opened for 6 months and will begin in September 2022. The fellowship contract may be potentially renewed for until the end of the project months, in accordance with the



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provisions of Regulation of Research Fellowships from the Foundation for Science and Technology, I.P. and FCIências.ID Fellowship Regulation.

9. **Monthly allowance:** The fellowship amounts to € 875,98, according to [table values](#) of the FCIências.ID Fellowship Regulation. 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

10. **Evaluation and selection process:** Candidates will be assessed by the quality of their CV (70%) and motivation letter (30%) and possibly, a selection interview for clarifications and improved explanations of curricular elements. If the jury chooses to carry out the selection interview, it will be to the 3 (three) candidates with the best classification in the curriculum evaluation, and the final evaluation will be as follows: 60% for the curriculum evaluation, 20% for the motivation letter and 20% for the selection interview.

11. **Selection Committee:** Professor José Manuel da Silva Cecílio (President of the jury), Professor António Casimiro Ferreira da Costa (Effective member), Professor Nuno Fuentecilla Maia Ferreira Neves (Effective member), and Professor Pedro Miguel Frazão Fernandes Ferreira (Substitute 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 27/07/2022 to 04/08/2022 .

14. **Application:** Applications should be sent via e-mail to [cdrosa@fc.ul.pt](mailto:cdrosa@fc.ul.pt), referring the ID Admorph/2022/04, by attaching the following documents:

- a. Curriculum vitae – **CV may be provided in PDF or through the [CIÊNCIAVITAE](#) system;**
- b. Certificate of completion of previous degree;
- c. Motivation letter;
- d. 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](mailto: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>.

