

## **ANNOUNCEMENT FOR THE AWARD OF 5 RESEARCH INITIATION FELLOWSHIPS**

Research Initiation Fellowship, 5 vacancies

A call for applications is now open for the attribution of five initiation to research grants within the scope of the initiative “Verão com Ciência”, for the development of presential research activities in "Verão com o Outlab", with the financial support of the National Foundation for Science and Technology, through national funds (PIDDAC), under the Regulation for Special projects, published in “Diário da República – notice no. 11367/2020 of 28th of May and FCT Regulation for Research Studentships and Fellowships, no. 950/2019 of 16-12-2019 in current version, under the following conditions:

**Scientific area:** Mathematics

**Recipient category:** Students enrolled in a bachelor in the areas of Mathematics or Computer Sciences.

### **Requirement for granting the fellowship:**

- Candidates must present valid proof of enrolment in bachelor in the areas of Mathematics or Computer Sciences;
- Applicants enrolled in study cycles leading to an academic degree must provide proof of enrolment by the academic services of the higher education institution in the academic year 2021-2022;
- Students who have already benefited from a BII for a period of 1 year or who exceed this period with this scholarship cannot benefit from the scholarship.

**Applicants eligibility:** Applicants must comply with the eligibility conditions laid down in article 9 of the Research Grants Regulation of the Portuguese Foundation for Science and Technology (2019).

**Workplan and objectives to be achieved:** It is intended that grant holders develop research work in Mathematics and collaborate in one of the scientific outreach activities currently under development at the Centre of Mathematics (CMAT) Outreach Laboratory. The grant holder must indicate, for the two activities described below, the order of preference.

Project A: public key systems based on the ring of integers (such as RSA, ElGamal and Rabin system) and comparable systems defined in elliptic curves over prime fields, namely the public key system ElGamal in elliptic curves.

Project B: digital signature systems based on the integer ring (such as RSA, ElGamal and DSA) and comparable systems defined in elliptic curves over prime fields, namely the digital signature system ECDSA, used particularly in blockchains.

The fellows are expected to study scientific texts, summarizing relevant aspects that may be of interest to the public in general, in order to produce posters containing information on the importance of Mathematics in modern cryptography.

**Applicable legislation and regulations:** Research Fellowship Holder Statutes, approved by Law no. 40/2004 of August 18, in its current version published by Decree-Law no. 123/2019 of August 28; Regulation of Scientific Research Fellowships of the University of Minho (RBIC), published in “Diário da República”, 2nd serie, no. 119, through dispatch no. 6524/2020 of 22-06-2020, ratified by ratification declaration no. 447/2021 of 22-06-2021 and Regulation of Research Studentships and Fellowships (RBI) of the Foundation for Science and Technology, I.P. - in force.

**Host/Contracting institution and scientific supervision:** The workplan will be carried out in CMAT, in School of Sciences of the University of Minho, located in *Campus de Gualtar*, Braga, under the scientific supervision of the following members of CMAT: Maria Cláudia Freitas de Sousa Mendes Araújo (Assistant Professor), Davide Manuel Santos Azevedo (Assistant Researcher), Maria Suzana Freitas de Sousa Mendes Gonçalves (Assistant Professor), José Pedro Miranda Mourão Patrício (Associate Professor) and Lisa Maria de Freitas Santos (Associate Professor)

**Fellowship duration:** The grant will take place for a period of 1 month, with a starting date on the 1st of September 2022.

**Amount of the research grant:** The value stipend (Monthly Maintenance Allowance) is 486,12 euros, in accordance with the stipends values published by the Foundation for Science and Technology (FCT I.P.) in the country (Annex I – Monthly Stipends Values for the maintenance allowances of the [FCT Regulation for Research Studentships and Fellowships](#)).

The fellowship will be paid until the 23rd of September, through bank transfer to the fellowship holder's NIB indicated in the contracting process.

**Other benefits:** Personal accident insurance.

**Exclusivity regime:** The grantee will perform the activities under exclusivity, as foreseen in article 5º of the Research Fellow Statutes and applicable regulations.

**Selection panel:**

President: Doctor Davide Manuel Santos Azevedo, Assistant Researcher of the Department of Mathematics, member of CMAT, University of Minho;

Effective member: Doctor Maria Suzana Freitas de Sousa Mendes Gonçalves, Assistant Professor of the Department of Mathematics, member of CMAT, University of Minho;

Effective member: Doctor Maria Cláudia Freitas de Sousa Mendes Araújo, Assistant Professor of the Department of Mathematics, member of CMAT, University of Minho;

Substitute member: Doctor Lisa Maria de Freitas Santos, Associate Professor of the Department of Mathematics, member of CMAT, University of Minho;

Substitute member: Doctor José Pedro Miranda Mourão Patrício, Associate Professor of the Department of Mathematics, member of CMAT, University of Minho.

The first effective member will substitute the president of the selection panel in case of impediment, with the first substitute member being nominated in the place of the first effective member.

**Criteria and procedures for applications assessment and selection:** The applications assessment will focus on the candidate's merit, following evaluation criteria, valued on a scale of 1 to 5 values:

- **Criterion (CV) - Curriculum Vitae, with weight 70%**

In this criterion the merit of the candidate will be evaluated, weighting:

- the curricular units in the study cycle, in the area of Mathematics or Computer Sciences, and the respective classifications;

- involvement in scientific outreach or interaction with society activities.

- **Criterion (CM) – Motivation letter, with weight 30%,**

In this criterion the motivation of the candidates with respect to scientific dissemination and interaction with society activities will be evaluated.

For the purposes of the decision on granting scholarships, candidates will be ranked according to the Curriculum Classification (CC), given by the weighted average, rounded to the hundredths, translated by the following formula:

$$(CC) = 0,7 \times (CV) + 0,3 \times (CM).$$

The candidates with (CC) less than 3,50 will not be eligible for the Initiation Research Fellowships.

The academic degrees and diplomas documents, or their respective recognition when awarded by foreign higher education institutions are not mandatory in the application phase, being replaced by a declaration of honour of the candidate with the contents of academic results. The documents of academic qualification or respective recognition will be required in the contracting phase and must attest facts that occurred on a date prior to the application. In situations of divergence between the information contained in the declaration and the documentation submitted for contracting the grant, only the information contained in the latter will be considered. If the documents proving the ownership of the academic degree and diploma, or the respective recognition under the terms of Decree-Law No. 66/2018, of the 16th of August, do not correspond to the classifications awarded in the evaluation of the academic path, which can change the candidate's ranking, the fellowship won't be contracted.

**Disclosure of results:** The provisional results of applications, based on the selection panel minutes, will be sent to the applicants by email, under article 12º of the FCT RBI until the 20th of July, 2022.

In case of unfavourable results, the candidates have a period of 10 working days to comment, if desired, in a prior hearing to interested parties, pursuant to articles 121 and 122 of the Code of Administrative Procedure (DL no. 4 / 2015 of January 7th).

**Complaint and appeal procedures:** The final results of the evaluation will be published through an ordered list by final grade obtained, posted in a visible and public place of the host unit, as well as by email to all applicants, enclosing for that purpose, the minutes of the jury deliberations.

The selected candidates must inform their willingness to accept the grant, in writing. In case of rejection, the fellowship will be awarded to the next candidates in the ordered list of applicants.

The final decision can be contested within 15 working days, by sending to the President of the jury the corresponding claim. Interested parties may also submit an optional hierarchical appeal, addressed to the Pro-Rector for Research and Projects, Professora Sandra Paiva.

**Application deadline and submission:** The call for applications is open from 12th of July, 2022 till 18th of July, 2022.

Applications must be formalized by sending an application letter with the following documents: curriculum vitae; qualifications certificate or declaration of the applicant; document listing the applicant's grades on the courses of the bachelor the student is enrolled in or declaration of the applicant, according to the application requirements; motivation letter.

Applications must be sent by email to both [candidaturas@cmat.uminho.pt](mailto:candidaturas@cmat.uminho.pt) and [bolsas@ecum.uminho.pt](mailto:bolsas@ecum.uminho.pt), indicating the reference 38/ECUM/CMAT/2022 - Verão Ciência of the call for applications in Subject. Applications submitted by other means will not be accepted.

**Fellowship contractualization:** The fellowship will be attributed by signing a fellowship contract between the University of Minho and the fellow, accordingly with the contract minute (annex IV of the Regulation of Research Fellowships of the University of Minho (RBIC), published in *Diário da República, 2nd Série, no. 119*, through dispatch no. 6524/2020 of 22-06-2020, ratified by ratification declaration no. 447/2021 of 22-06-2021, as indicated in 2.4 of the FCT document: "[Rules for Granting and Management of Grants within the scope of R&D projects, including infrastructure projects, the multi-annual financing program for R&D units and other FCT financing instruments \(Version 2021\)](#)".

The fellowship contract can only be signed once all the documentation has been received from the selected candidate, including evidence of the academic degrees or diplomas and proof and enrolment in a degree courses or non-conferring degree course.

After receiving all the documentation from the selected candidate, the contracting entity will proceed with the fellowship contractualization.

**Term and cancellation of fellowship contracts:** Without prejudice to the other causes provided the fellowship regulations (FCT and UMinho) and in the Statute of the Research Fellow, the fellowship ends with the completion of the work plan, as well as with the expiration date for which it was granted.

At the end of the fellowship, the grantee is obliged to present a Final Report of the work carried out, in accordance with the objectives and evaluation criteria defined with the scientific advisor, within 30 days after the end of the scholarship.

The **final report** must be prepared in accordance with Annex I of the Scientific Research Fellowships Regulation of the University of Minho (RBIC), published in *Diário da República, 2nd Série, no. 119*, through dispatch no. 6524/2020 of 22-06-2020, ratified by ratification declaration no. 447/2021 of 22-06-2021.