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# 57/ECUM/CMAT/2022-Breuca

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12/12/2022

## Job Information

<b>Organisation/Company</b>	Universidade do Minho
<b>Department</b>	Escola de Ciências
<b>Research Field</b>	Mathematics » Other
<b>Researcher Profile</b>	First Stage Researcher (R1)
<b>Country</b>	Portugal
<b>Application Deadline</b>	26/12/2022 - 23:59 (Europe/London)
<b>Type of Contract</b>	Not Applicable

<b>Job Status</b>	Not Applicable
<b>Is the job funded through the EU Research Framework Programme?</b>	Not funded by an EU programme
<b>Reference Number</b>	048257
<b>Is the Job related to staff position within a Research Infrastructure?</b>	No

## Offer Description

### ANNOUNCEMENT FOR THE AWARD OF A RESEARCH FELLOWSHIP

*Research Fellowship; 2 vacancies*

A call for applications is now open for the attribution of 2 (two) grants to BSc degree holders the scope of the R&D project BREUCA / CMAT Centro de Matemática da Universidade do Minho, (048257) – IC&DT co-financed by Agência Nacional de Inovação, through the Operational Program Competitividade e Internacionalização I Compete 2020 - Projetos em Co-Promoção (Sistema de Incentivos à I&DT), under the following conditions:

**Scientific Area:** Mathematical Modelling

**Recipient category:** MSc students and PhD students

#### Requirement for granting the fellowship:

- The applicants may apply without prior registration in the course for which the fellowship is open. The requirement to enrol in a degree course or non-academic degree course will be verified on the date of contracting the fellowship;
- Only fellowships whose selected applicants present a valid proof of enrolment in a degree course or non-academic degree course will be contracted, according to the type of the fellowship, issued by the academic services of the Higher Education Institution, indicating, respectively, the academic year or its duration (star and term).

#### Candidates profile:

- a) National, foreign and stateless persons who hold a BSc degree in Mathematics, Computer Science, or in Physics;
- b) Contracting requirements, such as enrolment in a MSc or PhD degree course at Universidade do Minho; proof of academic qualifications completed at the deadline for applications, including those resulting from academic degree recognition processes;
- c) preferential factors: knowledge of machine learning techniques and of control theory, knowledge of Python programming language.

**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:

The BREUCA project aims to develop a high-precision Virtual Reality simulator designed to be used in a gaming environment that will allow simulator users to compete in real-time races against racers on the track, immersing users in an environment as real as possible, that is, taking place effectively anywhere in the world, and virtually any user's home.

The chosen candidate will work as part of the BREUCA project, participating in the development of the different systems that will constitute the BREUCA project solution, namely, in the data analysis and design of the models to be integrated in the solution, in the development of models for defining vehicle trajectories, using, in particular, machine learning/deep learning techniques, system construction and prototyping, testing, tuning and validation of the system.

**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 the CMAT – Centro de Matemática da Universidade do Minho, located in Campus de Gualtar, Braga, under the scientific supervision of Professor Carolina Paula Baptista Ribeiro and of Professor Doutor Wolfram Erlhagen.

**Fellowship duration:** The scholarships will start in January 2023 and end on 30 June 2023, and are not renewable.

**Amount of the research grant:** The value stipend (Monthly Maintenance Allowance) is 875,98 per month, 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](#)) and Annex II of the 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, according to the applicable regulation.

Payment is made on the 23st of each month, through bank transfer to the Bank Identification Number of the fellow identified in the contractualization process.

**Other benefits:** Reimbursement of Voluntary Social Security (Social Security contributions), corresponding to the 1st level of discounts (*for research grants with a total duration 6 months or higher*) and 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:

The Jury consists of

- José Pedro Miranda Mourão Patrício, Associate Professor of Universidade do Minho (President of the Jury),
- Maria Fernanda Pires Costa, Assistant Professor of Universidade do Minho (Effective Member),
- Carolina Paula Baptista Ribeiro, Assistant Professor of Universidade do Minho (Effective Member),
- Ana Jacinta Pereira Costa Soares, Associate Professor of Universidade do Minho (Substitute Member),
- Wolfram Erlhagen, Associate Professor of Universidade do Minho (Substitute Member).

The first effective member will substitute the President of the selection panel in case of impediment, being nominate the first substitute member 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:

Applicant Merit - AM:

A1: Academic career (considering the classifications of academic degrees, according to the reference table), with a weighting of 60%;

A2: Personal curriculum (which reflects the relevance of the professional and scientific background in the scientific area of the fellowship and on the work-plan), with a weighting of 20%

A3: Motivation letter, with a weighting of 10%.

A4: Two recommendation letters, with a weighting of 10%.

The final classification of the applicant's merit with the achieved through the following formula:

$$AM = (A1 \times 0,6) + (A2 \times 0,2) + (A3 \times 0,1) + (A4 \times 0,1)$$

Candidates with a AM score of less than 3,3 will not be eligible for a research grant.

If the jury considers convenient, candidates classified in the first five positions, and who obtain a minimum classification of 3,3 in the AM, will be admitted to the Interview stage, with the Jury proceeding to assess the following sub-criteria:

- Interview - ENT:

- B.1: Interpersonal skills (30%);

- B.2: Knowledge demonstrated in the scientific area of the fellowship (40%);

- B.3: Motivation (20%);

- B.4: Language skills (10%).

The Jury also decided to evaluate the Interview, according to the following levels:

- High – 5 values;
- Good – 4 values;
- Sufficient - 3 values;
- Reduced – 2 values;
- Insufficient – 1 value.

The Interview classification (ENT) will be obtained by applying the following formula:

$$ENT = (B1 \times 0,3) + (B2 \times 0,4) + (B3 \times 0,2) + (B4 \times 0,1)$$

If an interview takes place, the final classification (CF) of the Applicant Merit (AM) and Interview (ENT) will be obtained by applying the following formula:

$$CF = (AM \times 0,7) + (ENT \times 0,3)$$

If there is no interview, the final classification (CF) will coincide with the Applicant Merit (AM):

$$CF = AM$$

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 August 16, 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.

*Notes: Applicants with degrees obtained abroad must present proof of recognition of qualifications in Portugal and conversion of the final classification obtained in them to the Portuguese classification scale or declaration under the terms indicated in the previous point. Candidates who do not comply with one of these provisions, the selection panel will assign "0" in the grade of the graduation and/or master course. Candidates will be evaluated on the remaining parameters.*

**Disclosure of results:** The provisional results of applications, based in the selection panel minutes, will be sent to the applicants by email until 90 working days from the applications deadline.

If 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 (*alphabetically, 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 candidate must inform its willingness to accept the grant, in writing. In case of rejection, the fellowship will be awarded to the next candidate 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 Vice-Rector for Research and Projects, Professor Sandra Cristina Almeida Paiva.

**Constitution of a selection reserve list:** The applicants ranked in the next positions on the ordered list will be included in a selection reserve list, which can be used until 31/03/2023.

**Application deadline and submission:** The contest is open 10 working days, when submitted to Euraxess Portugal.

Applications must be formalized by sending an application letter with the following documents: curriculum vitae; qualifications certificate or declaration of the applicant; motivation letter; statement proving that meets the conditions for the grant typology, according to the application requirements; other documents important to the evaluation process).

Applications must be sent by email to [candidaturas@cmat.uminho.pt](mailto:candidaturas@cmat.uminho.pt) and [bolsas@ecum.uminho.pt](mailto:bolsas@ecum.uminho.pt), indicating the reference 57/ECUM/CMAT/2022-Breuca in Subject. Applications submitted by other means will not be accepted.

The two letters of recommendation from professors or researchers of recognized merit in the scientific area of this call must be sent directly by them by email to the addresses [candidaturas@cmat.uminho.pt](mailto:candidaturas@cmat.uminho.pt) and [bolsas@ecum.uminho.pt](mailto:bolsas@ecum.uminho.pt), indicating the reference 57/ECUM/CMAT/2022-Breuca in Subject.

**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 contract may only be concluded after all the documentation required is collected, which must take place within a maximum period of 6 months including evidences of the academic degrees or diplomas and enrolment in non-conferring courses.

Once all the documentation has been received, the contracting entity has a period of 15 working days to conclude the scholarship contract. Once received, the fellow must return the contract duly signed within 15 working days.

The activities under the fellowship contract can only began after proper authorization by the contracting entity.

**Term and cancellation of fellowship contracts:** Without prejudice to the other causes provided the fellowship regulations (FCT and Universidade do Minho) 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 or renewed.

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.

## Requirements

**Research Field** Mathematics » Other

**Education Level** Undergraduate

### Skills/Qualifications

Please you can find the information in the Offer Description section

### Specific Requirements

Please you can find the information in the Offer Description section

## Additional Information

### Benefits

Please you can find the information in the Offer Description section

### Eligibility criteria

Please you can find the information in the Offer Description section

### Selection process

Please you can find the information in the Offer Description section

## Additional comments

Please you can find the information in the Offer Description section

Website for additional job details

<https://www.ecum.uminho.pt/pt/Investigacao/Paginas/Emprego-Cientifico.aspx>

## Work Location(s)

Number of offers available

2

Company/Institute

Universidade do Minho

Country

Portugal

State/Province

Braga

City

Braga

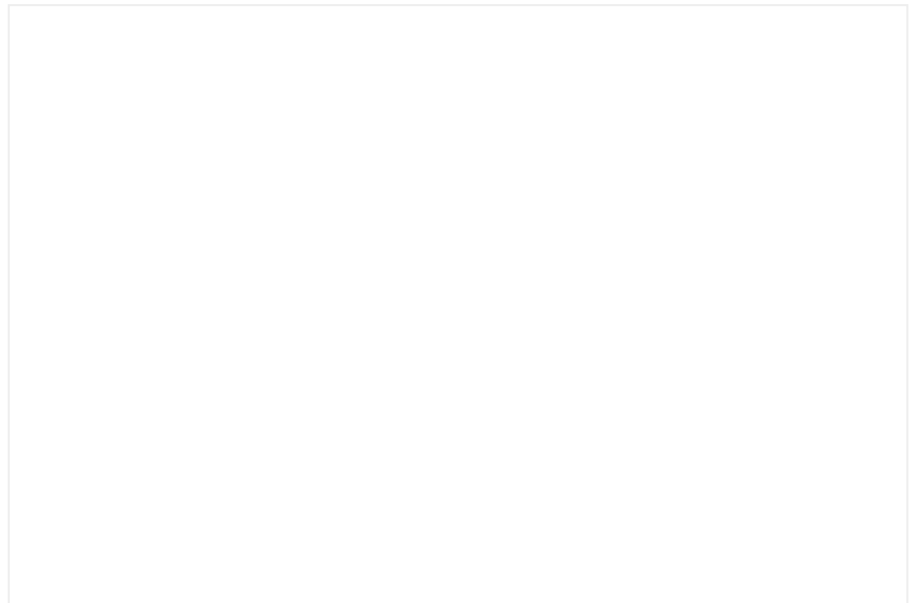
Postal Code

4710 - 057

Street

Campus de Gualtar

Geofield



## Where to apply

E-mail

candidaturas@cmat.uminho.pt

## Contact

State/Province

Braga

City

Braga

**Website**

<https://www.uminho.pt>

**Street**

Campus de Gualtar

**Postal Code**

4710-057

**E-Mail**

sec@cmat.uminho.pt

**Phone**

351 253604367