#### 19/01/2022

## 03/ECUM/CFUM2022 - TOCHAIR

#### Where to apply

Application Deadline: 01/02/2022 23:00 - Europe/London

**Contact Details** 

Where to send your application.

**COMPANY** 

Universidade do Minho

E-MAIL

bolsas@ecum.uminho.pt

#### Hiring/Funding Organisation/Institute

ORGANISATION/COMPANY COUNTRY

Universidade do Minho Portugal

**DEPARTMENT**Escola de Ciências

Braga

ORGANISATION TYPE STATE/PROVINCE

Higher Education Institute Braga

WEBSITE POSTAL CODE

https://www.uminho.pt

4710-057

E-MAIL

centrodefisica@fisica.uminho.pt

**STREET** 

Campus de Gualtar

**PHONE** 

+ 351 253 601 560

ORGANISATION/COMPANY

Universidade do Minho

LOCATION

Portugal > Braga

**RESEARCH FIELD** 

Mathematics > Statistics
Other

REFERENCE NUMBER

PTDC/MAT-APL/28247/2017

**RESEARCHER PROFILE** 

First Stage Researcher (R1)

**APPLICATION DEADLINE** 

01/02/2022 23:00 - Europe/London

### OFFER DESCRIPTION

A RESEARCH FELLOWSHIP IN AN INTEGRATED MASTER'S

Title: Research Fellowship; 1 vacancy

A call for applications is now open for the attribution of 1 grant(s) of BI scholarship (licensed) under within the scope of the R&D project TOCHAIR - The Optimal Challenges in Irrigation, POCI-01-0145-FEDER-028247, with ref.<sup>a</sup> PTDC/MAT-APL/28247/2017, financed European Regional Development Fund (FEDER), through COMPETE 2020 - Competitiveness and Internationalization Operational Program (POCI) and with the financial support of the FCT/MCTES through national funds (PIDDAC), under the following conditions:

Scientific Area: Statistics, Mathematics or in related fields.

Recipient category: Research grants (BI) are intended to carry out R&D activities by students with a bachelor's degree or equivalent enrolled in a master's degree.

Requirement for granting the fellowship:

Candidates may apply for this scholarship without prior enrollment in a course associated with the identified scientific areas. The requirement to enroll in a

degree-granting course will be verified on the date of contracting the scholarship.

The scholarship will only be contracted if the selected candidate presents valid proof of enrollment in the awarding course, according to the type of scholarship in the competition, issued by the academic services of the Higher Education Institution, respectively with the indication of the current academic year or its duration (beginning and end).

Enrollment in non-certified courses (without curricular units) will not be considered as proof of enrollment.

Candidates profile: Candidates must have academic qualifications in one of the scientific areas mentioned above.

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:

In this project we intend to use and develop knowledge from various scientific areas such as: Agronomy, Optimal Control, Statistics, Electronics, Informatics and Mathematical Modeling to be applied in irrigation systems for any type of crop, anywhere in the world.

The use of adequate mathematical modelling, using optimal control tools and agronomic knowledge in irrigation systems, allows:

- efficient use of water, which implies saving water and energy;
- greater adaptation of the crop's water needs to the different stages of its growth, allowing for a sustainable and healthy growth of the crop,
- detect failures in the irrigation system,
- estimate the need for irrigation water for a year for different scenarios: average year, drought year, several drought years,

The scholarship holder will be integrated in the Research activity of the TOCHAIR project team, within the scope of activity task, indicated below:

Activity 2 – Statistics Data

- Literature review of the models considered;
- Application of statistical models in the context of time series (modeling and forecasting);
- Time series clustering;
- Comparison of real data versus results from models already developed.

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 Physics Center of University of Minho, under the scientific supervision of the Doctor Arminda Manuela Andrade Pereira Gonçalves and Doctor Sofia Oliveira Lopes.

Fellowship duration: The grant will take place for a period of 3 months, with a provisional starting date on the February of 2022. The scholarship may eventually be renewed in accordance with the execution of the project and the applicable legislation.

Amount of the research grant: The value stipend (Monthly Maintenance Allowance) is 835,98 euros 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 5° of the Research Fellow Statutes and applicable regulations.

Selection panel:

Composition of the Selection Jury:

President: Doctor Arminda Manuela Andrade Pereira Gonçalves, Centro de Matemática, Departamento de Matemática, Universidade do Minho

Effective Member: Doctor Sofia Oliveira Lopes, Centro de Física, Departamento de Matemática, Universidade do Minho

Effective Member: Doctor Maria Teresa Mesquita Cunha Machado Malheiro, Centro de Matemática, Departamento de Matemática, Universidade do Minho

Substitute Member: Doctor Rui Miguel Soares Pereira, Centro de Física, Departamento de Matemática, Universidade do Minho

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 (80%):

A.1 : Academic path (considering the classifications of academic degrees), with a weighting of 45%;

A.2 : Personal curriculum (considering professional and scientific background), with a weighting of 45%

A.3: Motivation letter, with a weighting of 10%.

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

$$MC = (A.1*0,45) + (A.2*0,45) + (A.3*0,1)$$

Candidates classified in the first 4 positions, who obtain a minimum classification of 3.5 in the MC, will be admitted to the Interview phase, with the Jury proceeding to evaluate the following sub-criteria:

- B. Interview ENT (20%):
- B.1: Interpersonal skills and motivation (50%);
- B.2: Knowledge demonstrated in the contest area (50%);

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

- High 5 values;
- Good 4 values:
- Enough 3 values;
- Reduced 2 values;
- Insufficient 1 value.

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

$$ENT=(B.1\times0.5) + (B.2\times0.5).$$

If a candidate called for the interview does not present himself for the interview, he is excluded from the competition.

The final classification (CF) will be obtained by applying the following formula:

$$CF=(MC\times0.8) + (ENT\times0.2).$$

If a candidate has a final classification of less than 3.5, he is excluded from the competition.

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 evaluation results project, based on the minutes, will be sent to candidates by email, pursuant to article 12 of the FCT RBI and article 13 of the UMinho RBIC.

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 Pro-Rector for Research and Projects, Professor Dr. Sandra 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 31/05/2022.

Application deadline and submission: The call for applications is open from the 19th of January till 01th of February of 2022.

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 bolsas@ecum.uminho.pt, indicating the reference of the call for applications, 03/ECUM/CFUM2022- TOCHAIR, 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 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 degree courses or non-conferring courses, depending on the type of scholarship).

Once all the documentation has been received, the contracting entity has a period of 60 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 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 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.

#### More Information

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

# Web site for additional job details

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

**REQUIREMENTS** 

#### Offer Requirements

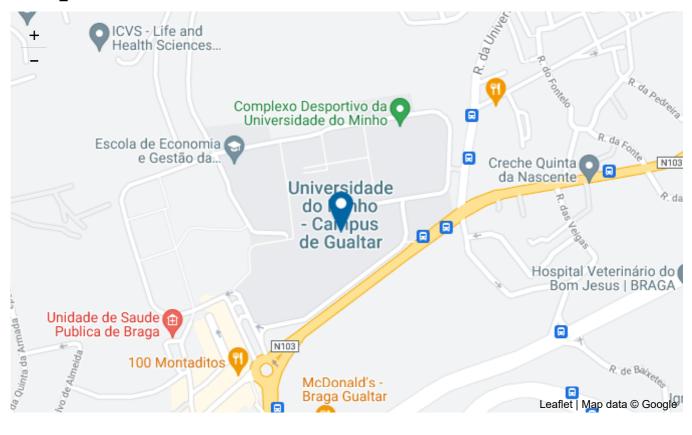
## Skills/Qualifications

Please you can find the information in the Offer Description section

# Specific Requirements

Please you can find the information in the Offer Description section

## Map Information



Personal Assistance locations

#### WORK LOCATION(S)

1 position(s) available at Universidade do Minho Portugal Braga Braga 4710 - 057 Campus de Gualtar

EURAXESS offer ID: 729970

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Job Work Location