

## CALL FOR APPLICATIONS FOR TWO (2) SCIENTIFIC RESEARCH GRANTS (BI) AS PART OF A R&D PROJECT

**1. Reference:** FAIST-IPCA-ESD-ID+-BI-1 and FAIST-IPCA-ESD-ID+-BI-2

**2. Number of vacancies:** Two (2) vacancies

**3. Project:** FAIST - Sustainable and Technological Agile Smart Factory

The Institute for Research in Design, Media and Culture (ID+), an R&D unit of the School of Design (ESD) of the Polytechnic Institute of Cávado and Ave (IPCA), is calling for applications for two (2) Scientific Research Scholarships (BI) for graduates, within the scope of the FAIST - Fábrica Ágil Inteligente Sustentável e Tecnológica project, financed by the funds of the "Next Generation EU" program of the Recovery and Resilience Plan (PRR), within the scope of the Mobilizing Agendas for Business Innovation, in component 5 - Capitalization and Business Innovation within the scope of Notice no. 02/C05-i/2020. 02/C05-i01/2022.

#### **4. Scientific Areas:**

**BI1** - Graphic Design/Interaction Design/Digital Design or in areas considered related.

**BI2** - Electronic and Computer Engineering/ Biomedical Engineering/ Computer Engineering and Industrial Engineering and Management or in areas considered related.

#### **5. Admission requirements:**

##### 5.1 Admission requirements:

- The candidate must be enrolled in a master's degree, integrated master's degree or doctorate or enrolled in a non-academic degree course, namely advanced training courses or postgraduate courses, in accordance with the legal regime established in numbers 3 to 6 of article 4 of Decree-Law no. 74/2006, of March 24, and

- Have a degree <sup>(1)</sup> in the areas of Graphic Design, Interaction Design, Digital Design or in areas considered to be related in the case of Grant 1.

- Have a degree <sup>(1)</sup> in the areas of Electronic and Computer Engineering, Biomedical Engineering, Computer Engineering and Industrial Engineering and Management or in areas considered related in the case of Grant 2.

<sup>(1)</sup> If the qualification was awarded by a foreign higher education institution, it must be recognized by a Portuguese higher education institution, under the terms of article 25 of Decree-Law no. 66/2018, of August 16, which approves the legal regime for the recognition of academic degrees and higher education diplomas awarded by foreign higher education institutions and article 4(2)(e) of Decree-Law no. 60/2018, of August 3, and any formalities established therein must be fulfilled by the date of the act of hiring.

## 5.2 Preferential requirements:

- To be a student enrolled on a master's degree course in the areas of the IPCA Schools of Design and Technology;
- Graduation in the scientific areas of the competition, with a final average of at least 14 points;
- Academic or professional experience in the scientific areas of the competition.

## 6. Work plan to be developed throughout the scholarship period:

**BI1** - Carry out a systematic review of the state of the art in graphic applications that include three-dimensional scanning of feet, conversion into solid meshes for 3D printing, 3D printing with customization of functional and aesthetic elements for footwear; define functional and aesthetic requirements for a digital application proposal; design and development of an application proposal.

**BI2** - Carry out a systematic review of the state of the art in three-dimensional modeling systems in generative design in industrial contexts, with a focus on identifying best practices and potential applications in the footwear industry; identify the functional and ergonomic requirements for adapting foot anatomies to 3D meshes with functionalities adapted to these anatomical characteristics; automate a method that allows the 3D mesh of the foot to conform to the geometry of a pre-established generative model and make digital models for 3D printing based on NTopology software.

## 7. Applicable legislation and regulations:

Research Grant Holder Statute - Decree-Law no. 89/2013, which was subsequently amended by Decree-Law no. 123/2019, of August 28. Scholarship holder statute in force: <https://www.fct.pt/apoios/bolsas/estatutobolseiro>. New Regulation on Research Grants of the Polytechnic Institute of Cávado and Ave, approved through Order No. 12952/2023, published in the 2nd series of the DR.

## 8. Place of work:

The work will be carried out at the R&D unit (ID+) of the School of Design (ESD) of the Polytechnic Institute of Cávado and Ave (IPCA) - Barcelos, under the scientific supervision of Professor PhD Miguel Terroso, Professor PhD João Vilaça and Professor PhD Nuno Martins.

## 9. Duration of the scholarship:

The scholarship will last for 12 months, starting in February 2024.

The scholarship contract may be renewed for successive periods of 6 months, provided that the candidate meets the requirements, up to the maximum time limit for which funding is secured for the project.

## 10. Amount of the monthly maintenance allowance:

Scholarship holders will be awarded a monthly allowance of €930.98, in accordance with the table of values for FCT scholarships [https://www.fct.pt/wp-content/uploads/2023/02/Tabela-de-Valores-SMM\\_2023.pdf](https://www.fct.pt/wp-content/uploads/2023/02/Tabela-de-Valores-SMM_2023.pdf), and according to the table in Annex III of the Research Scholarship

Regulations of the Polytechnic Institute of Cávado and Ave, in accordance with the update authorized for the year 2023. This amount will be paid monthly by bank transfer.

**11. Other benefits:**

Reimbursement of Voluntary Social Security, corresponding to the 1st Tier of the contribution base, and Personal Accident Insurance.

**12. Assessment of applications:**

Applications will be assessed considering the selection criteria set out below. If the selected grant holder withdraws, the second candidate on the list will automatically be selected.

**13. Assessment and selection criteria and procedures:**

13.1 Evaluation:

The evaluation considers the merit of the candidate in the context of the academic degrees, curricular evaluation and related scientific and/or professional experience presented by the candidate, in which:

- Curriculum evaluation (CA), which corresponds to 50% of the weighting;
- Related scientific and/or professional experience (CE), which corresponds to 50% of the weighting.

a. The following assessment criteria are defined:

- Curriculum evaluation (CA):

- i. Final degree classification, 50%;
- ii. Attendance and/or completion of training courses in the scientific areas of the research project, 50%;

- Related scientific and/or professional experience (CE):

- i. Participation and/or development of extracurricular projects in the scientific areas of the research project, 50%.
- ii. Academic and/or professional portfolio of artistic achievements and/or professional projects, 50%.

13.2 The final grade will be calculated according to the following formula:

$$(0,5*AC) + (0,5*EC)$$

13.3 In the event of a tie, preference will be given to the score obtained in the AC, and in the event of a tie, preference will be given to the score obtained in each of the factors that make up the CE criterion, in the following order:

- i. Participation and/or development of extracurricular projects in the scientific areas of the research project.

- ii. Academic and/or professional portfolio of artistic achievements and/or professional projects.

Candidates with a final score of less than 9.50 will be excluded.

#### **14. Composition of the Selection Panel:**

President:

- Professor PhD Miguel Machado de Sá Abreu Terroso, Adjunct Professor at the School of Design of the Polytechnic Institute of Cávado and Ave and integrated member of ID+.

Effective Members:

- Professor PhD João Luís Araújo Vilaça, Coordinating Professor at the School of Technology of the Polytechnic Institute of Cávado and Ave and Director of the Applied Artificial Intelligence Laboratory (2Ai).
- Professor PhD Filipe José Palhares Chaves, Assistant Professor at the Professional Higher Technical School of the Polytechnic Institute of Cávado and Ave.

Alternate Members:

- Professor PhD Duarte Filipe Oliveira Duque, Adjunct Professor at the School of Technology of the Polytechnic Institute of Cávado and Ave and member of 2Ai.
- Professor PhD Nuno Duarte Martins, Coordinating Professor at the School of Design of the Polytechnic Institute of Cávado and Ave and an integrated member of ID+.

If the President of the Selection Board is unable to attend, he will be replaced by the first member, and the alternate member will be called upon to replace the member. Minutes of the selection panel meetings will be drawn up for which all members are responsible.

#### **15. Participation of interested parties:**

The draft assessment results will be notified to the candidates by email with receipt of delivery of the notification, so that they can give their opinion for the purposes of the hearing of interested parties, under the terms of article 121 et seq. of the Code of Administrative Procedure, to the email address [idmais\\_poloipca@ipca.pt](mailto:idmais_poloipca@ipca.pt). In the absence of a statement from the candidates, the final ranking project is considered to have been automatically approved.

#### **16. Decision:**

Once the prior hearing period has elapsed, or the issues raised in this context have been assessed, the jury will draw up the final ranking list of the admitted candidates and submit it, together with the other parts of the procedure, to the President of the IPCA for approval.

#### **17. Form of publication/notification of results:**

The results of the evaluation will be published in a list ordered by final grade obtained, posted in a visible and public place at the School of Design, and the candidates will be notified by email, with receipt of delivery of the notification, under the terms of article 16, no. 1 a), of the Research Scholarship Regulations of the Polytechnic Institute of Cávado and Ave.

The final results of the evaluation will be published in a list ordered by the final grade obtained, posted in a visible and public place in the IPCA and on the IPCA website in the Recruitment Processes menu and Research Grants submenu.

### 18. Application deadline:

The competition is open for a period of 10 working days after publication on the website <https://euraxess.ec.europa.eu>.

### 19. How to submit applications:

Applications must be sent exclusively by e-mail to the following address: [idmais\\_poloipca@ipca.pt](mailto:idmais_poloipca@ipca.pt) duly referenced in the subject of the message.

Applications must be formalized by means of a presentation, accompanied by the following documents:

- Complete curriculum vitae;
- Proof of enrollment in a master's degree, integrated master's degree, doctorate or non-academic degree course integrated into the educational project of a higher education institution;
- Certificate(s) of qualifications and other documents deemed relevant for consideration (optionally letters of reference).

The complete Curriculum Vitae and Certificate of Qualifications are compulsory documents and failure to submit them will result in exclusion. Proof of enrolment on a master's degree, doctorate or non-degree course must be submitted by the time the grant is awarded, and the candidate must attach a sworn statement that they meet the requirements for enrolment, under penalty of exclusion.

If the candidate is not a Portuguese citizen, he/she must provide documentary proof, at the time of signing the scholarship contract, that he/she has authorization to remain lawfully in Portuguese territory and that this authorizes him/her to sign the contract resulting from the award of the scholarship.

If the required qualification has been awarded by a foreign higher education institution, it must comply with the provisions of Decree-Law no. 66/2018, of August 16, and any formalities established must be fulfilled by the date of conclusion of the scholarship contract.

Applications sent by other means or submitted late or incorrectly will not be accepted.

### 20. Complaints:

The final ranking list, duly approved, may be appealed to the President of the IPCA, to be submitted within 15 working days of notification, to the email [idmais\\_poloipca@ipca.pt](mailto:idmais_poloipca@ipca.pt), which does not have suspensive effect.

## 21. Non-discrimination and equal access policy:

The IPCA promotes a policy of non-discrimination and equal access, whereby no candidate may be privileged, benefited, disadvantaged or deprived of any right or exempted from any duty on the grounds of ancestry, age, gender, sexual orientation, marital status, family situation, economic situation, education, social origin or condition, genetic heritage, disability, chronic illness, nationality, ethnic origin or race, territory of origin, religion, political or ideological convictions and trade union membership, genetic heritage, reduced working capacity, disability, chronic illness, nationality, ethnic origin or race, territory of origin, language, religion, political or ideological convictions and trade union membership.

Barcelos, February 7, 2024

The President of the Polytechnic Institute of Cávado and Ave

Professor PhD Maria José Fernandes

## ANEXO I

### Modelo do Relatório Final de Apreciação do Programa de Bolsa a elaborar pelo Bolseiro

Identificação do bolseiro:

Identificação da bolsa, do projeto e entidade de acolhimento:

Orientador científico da bolsa:

#### 1. Objeto e objetivos da bolsa

*[De acordo com o tipo de bolsa, anúncio e plano de atividades]*

#### 2. Trabalhos desenvolvidos

*[Apresentação cronológica das atividades desenvolvidas, incluindo listagem das publicações e trabalhos elaborados no âmbito do contrato de bolsa com os respetivos endereços URL, bem como cópia do respetivo trabalho final, no caso de bolsa concedida para obtenção de grau ou diploma académico].*

#### 3. Resultados

*[Descrição sucinta dos resultados alcançados e eventuais desvios]*

#### 4. Apresentação dos resultados alcançados

## 5. Autoavaliação e avaliação do programa de bolsa

*[Análise crítica do trabalho desenvolvido, conhecimentos adquiridos e avaliação geral – positiva ou negativa – do desempenho e do programa de bolsa]*

**Nota:** Anexos a apresentar em formato eletrónico: Publicações e Trabalhos elaborados no âmbito do Contrato de Bolsa e cópia do Trabalho Final apresentado, no caso de Bolsa concedida para a obtenção de grau ou diploma académico. Em caso de bolsa de participação em reuniões científicas anexar comprovativo de presença na reunião.

Barcelos, \_\_\_ de \_\_\_\_\_ de 20\_\_

O Bolseiro de Investigação, \_\_\_\_\_ (nome completo)

### ANEXO II

Modelo de Relatório Final de Avaliação da Atividade do Bolseiro de Investigação Científica a elaborar pelo Orientador Científico

Orientador científico da bolsa:

Identificação da bolsa, do projeto e entidade de acolhimento:

Bolseiro:

#### 1. Análise crítica das atividades e do trabalho desenvolvidos pelo bolseiro

*[Breve descrição das atividades desenvolvidas pelo bolseiro, de acordo com o anúncio e o plano de atividades e apreciação crítica dos objetivos e resultados atingidos pelo bolseiro.]*

#### 2. Avaliação final do trabalho desenvolvido pelo bolseiro

*[Apreciação global fundamentada do trabalho desenvolvido pelo bolseiro, com balanço final positivo ou negativo, abordando o seu desempenho, esforço e dedicação]*

Barcelos, \_\_\_ de \_\_\_\_\_ de 20\_\_

O Orientador Científico da Bolsa, \_\_\_\_\_ (nome completo)

## Contrato de Bolsa de Investigação

### ENTRE:

**PRIMEIRO:** INSTITUTO POLITÉCNICO DO CÁVADO E DO AVE, pessoa coletiva número 503 494 933, com sede na avenida Professor Doutor João Carvalho, Campus do IPCA, 4750-810 Barcelos, representado neste ato pelo sua Presidente, \_\_\_\_, adiante designado por **Primeiro Outorgante**

e

**SEGUNDO:** \_\_\_\_, de nacionalidade \_\_\_\_, nascido a \_\_-\_\_-\_\_\_\_, portador do \_\_\_\_ (Cartão de Cidadão/Bilhete de Identidade/Passaporte/Outro) n.º \_\_\_\_\_, válido até \_\_-\_\_-\_\_\_\_, contribuinte fiscal n.º \_\_\_\_\_, residente na \_\_\_\_, adiante designado por **Segundo Outorgante**,

É celebrado de boa-fé e reciprocamente aceite o presente contrato de **bolsa** de investigação ao abrigo do Estatuto do Bolseiro de Investigação, aprovado pela Lei n.º 40/2004, de 18 de agosto, na sua redação atual, e do Regulamento de Bolsas de Investigação do IPCA, que se rege pelas cláusulas seguintes:

**CLÁUSULA 1.ª** – O **Primeiro Outorgante** compromete-se a conceder ao **Segundo Outorgante** uma bolsa de \_\_\_\_ (indicar e caracterizar o tipo de bolsa e sua referência) no âmbito do projeto “ \_\_\_\_” (indicar a referência e o título do projeto em que se insere, se for o caso) financiada por \_\_\_\_\_, pelo período de \_\_\_\_ (indicar meses ou dias, consoante o caso), \_\_\_\_ (eventualmente renovável OU não renovável), com início em \_\_-\_\_-\_\_\_\_.

**CLÁUSULA 2.ª – 1.** O **Segundo Outorgante** obriga-se a desenvolver os trabalhos constantes do plano de atividades anexo ao presente contrato de bolsa, cujo conteúdo declara ter tomado conhecimento integral e aceitar sem reservas a partir da data de início do presente contrato.

2. O desempenho de funções pelo **Segundo Outorgante** a título de bolseiro é efetuado em regime de dedicação exclusiva nos termos previstos no artigo 5.º do Estatuto do Bolseiro de Investigação.

3. O **Segundo Outorgante** realiza os trabalhos no \_\_\_\_, sito em \_\_, que funciona como entidade de acolhimento, tendo como Orientador Científico \_\_\_\_ (nome e instituição).

**CLÁUSULA 3.ª** - Ao **Segundo Outorgante** são reconhecidos os direitos previstos na lei, de acordo com a sua situação, nomeadamente nos artigos 9.º a 11.º do Estatuto do Bolseiro de Investigação, no(s) regulamento(s) aplicável(eis) e no presente contrato.

**CLÁUSULA 4.ª** - O **Segundo Outorgante** obriga-se a cumprir os deveres, aplicáveis à sua situação, previstos na lei, nomeadamente no artigo 12.º do Estatuto do Bolseiro e Investigação, no(s) regulamento(s) aplicável(eis) e no presente contrato.

**CLÁUSULA 5.ª – 1.** O montante do subsídio mensal de manutenção é de €\_\_\_\_,\_\_\_\_ (\_\_\_\_), a liquidar mensalmente, através de cheque ou transferência bancária.



2. O **Segundo Outorgante** beneficia também de um seguro de acidentes pessoais durante o período de concessão da bolsa, de cujas condições declara ter tomado conhecimento e aceitar sem reservas.

3. O Segundo Outorgante beneficiará, ainda, do seguro social voluntário correspondente ao primeiro escalão, caso opte pela sua atribuição e desde que cumpra as condições previstas legalmente, comprometendo-se a entregar, até 10 dias úteis após o prazo limite de pagamento, no serviço competente, o original do comprovativo de pagamento do Seguro Social Voluntário, sob pena de, esgotado aquele prazo, poder não ser reembolsado o valor em questão.

4. Acrescem ainda as seguintes componentes de bolsa \_\_\_\_\_ (indicar se aplicável)

**CLÁUSULA 6.ª – 1.** O presente contrato não gera qualquer relação de natureza jurídico-laboral nem de prestação de serviços, não adquirindo o bolseiro a qualidade de trabalhador em funções públicas. **2.** Não são devidos subsídios de alimentação, natal, férias ou quaisquer outros não previstos no Estatuto do Bolseiro de Investigação, no(s) regulamento(s) aplicável(eis) e no presente contrato.

**CLÁUSULA 7.ª – 1.** Ao presente contrato aplica-se o Estatuto do Bolseiro de Investigação e o Regulamento Bolsas de Investigação do IPCA, do qual o bolseiro declara ter tomado conhecimento. **2.** Os casos omissos serão decididos pelo Presidente do IPCA, ouvido o Orientador científico.

**CLÁUSULA 8.ª –** São causas de cessação do contrato as previstas no Estatuto do Bolseiro de Investigação e no Regulamento Bolsas de Investigação do IPCA

As partes declaram estar de acordo com o clausulado neste contrato, que é feito em duplicado, ambas as vias valendo como originais, ficando um exemplar na posse de cada um dos Outorgantes.

Barcelos, \_\_ de \_\_\_\_\_ de \_\_\_\_\_.

O Primeiro Outorgante,

O Segundo Outorgante,