



## Institute of Earth Sciences (ICT) – Geosciences Department

### Master scholarship, 1 vacancy

31 August 2022

A call for applications to a Master Scholarship in geochemistry within the scope of the “CO2 Geological Pilots in Strategic Territories – PilotSTRATEGY”, funded by the European Union through the program Horizon 2020, GA n.101022664, under the following conditions

#### Scientific area:

Geology, Earth Sciences and related areas with preference for a specialization in Geochemistry and geochemical modelling techniques.

#### Admission requirements:

##### Mandatory conditions:

- 1) MSc in one of the areas mentioned in the scientific area;
- 2) Registered or available to register on the PhD in Earth and Space Sciences of the University of Évora <https://www.uevora.pt/en/study/courses/doctoral-degrees?curso=2525>.

##### Preferential conditions:

- 1) Skills in mineralogy, petrography and geochemistry areas;
- 2) Experience in laboratory activities (geology and chemistry) involving analytical techniques (e.g. XRF, XRD, SEM-EDS, ICP-MS, TGA, optical microscopy);
- 3) Skill in geological data acquisition and processing.

As set forth FCT Research Scholarship Regulation No. 950/2019 of December 16, 2019, article 3 and 6, candidates for “BI” (Research Grants) must comply as a rule condition for the award of the scholarship, the effective inclusion in study cycles leading to the attribution of academic degrees or in courses not leading to an academic degree. Courses that do not confer an academic degree correspond to the courses provided for in subparagraph e) of paragraph 3 of article 4 of Decree-Law No. 74/2006 of 24 March and must be developed in a higher education institution in association with at least one R&D unit, including a course plan in one or several research areas of the unit.

#### Work Plan:

The activities will be carried out in the scope of the *PilotSTRATEGY* project ([pilotstrategy.eu](http://pilotstrategy.eu)), as a researcher of the University of Évora, involving the acquisition and interpretation of geological

data to build a geochemical model able to describe the geochemical behaviour of CO<sub>2</sub> in a porous media reservoir.

The selected candidate will be required to utilize optical microscopy XRD and SEM-EDS and other tools to identify potentially reactive mineral phases and mineral surface microtextures after exposure to CO<sub>2</sub>.

The selected candidate will be required to model the results of laboratory experiments on the CO<sub>2</sub>+water+rock interaction, based on the interpretation of chemical analysis before and after exposure to CO<sub>2</sub>, and to upscale the results of that model from the sample size to the pilot size, using TOUGHREACT, CRUNCHFLOW or similar geochemical modelling software.

**Applicable legislation and regulations:**

The grant will start upon signature of a contract between the University of Évora and the scholarship holder, as set in the template [https://www.fct.pt/apoios/Minuta\\_Contrato\\_Bolsa.docx](https://www.fct.pt/apoios/Minuta_Contrato_Bolsa.docx), pursuant to the Research Scholarship Statute (Law No. 40/2004 of August 18 and Decree-Law No. 123/2019 of August 28) and in accordance with the legislation and Regulation of Research Grants of the Foundation for Science and Technology, IP in force, regulation nº950/2019 of December 16, 2019: <https://www.fct.pt/apoios/bolsas/regulamento.phtml.pt> and other applicable rules.

**Place of work:**

The work will be developed at Institute of Earth Sciences (ICT – Polo de Évora), HERCULES Laboratory and Geosciences laboratories of the University of Évora under the scientific supervision of Professor Jorge Pedro (University of Évora) and Professor Mário Abel Gonçalves (University of Lisboa).

**Duration of the scholarship:**

The scholarship will have a duration of one year, starting on October of 2022. The scholarship contract may be renewed for equal periods up to a maximum of 3 renewals.

**Amount of monthly maintenance allowance:**

Amount of monthly maintenance allowance: The amount of the scholarship corresponds to €1 144,64 according to the table of scholarships awarded directly by FCT, I.P. in Portugal (<http://fct.pt/apoios/bolsas/valores>), payments being made monthly, by check or bank transfer.

**Selection methods:**

The selection methods to be used will be the following: curricular evaluation (50%), followed by an interview (50%) with the pre-selected candidates

**Composition of the Selection Jury:**

Presidente: Prof. Júlio Ferreira Carneiro;

1º Vogal – Prof. Jorge Manuel Costa Pedro;

2º Vogal – Prof. Mário Abel Gonçalves;

1º vogal suplente - Profª Patrícia Sofia Martins Moita;

2º vogal suplente – Prof. Carlos Alexandre Ribeiro.

**Advertising/notification of results:**

The results of the evaluation will be publicised, through an ordered list by final grade obtained, posted in a visible and public place (ICT, Colégio Luis António Verney, Rua Romão Ramalho, nº59, Évora 7000-671), being the candidate (a) approved notified through email.

To ensure the right of prior hearing of interested parties, the Final Classification project will be announced by any written means to all interested parties.

After communicating the provisional list of the results of the evaluation, candidates have a period of 10 working days to express their opinion in a preliminary hearing of interested parties.

**Application deadline and submission of applications:**

The tender is open from 09 to 22 of September of 2022 and the results of the selection will be published by 27 of September of 2023.

Applications must be formalized by sending a letter of application accompanied by the following documents: Curriculum Vitae, qualifications certificate and other supporting documents deemed relevant, via email to Professor Jorge Pedro, [jpedro@uevora.pt](mailto:jpedro@uevora.pt) with the subject "Candidatura Bolsa de Doutoramento Projeto PilotSTRATEGY".

For the purposes of application, the evidence may be replaced by a declaration of honour signed by the candidate, but the failure to demonstrate that evidence, in the contracting phase, possession of the required degree on the deadline for application or the non-presentation of proof of enrolment in the study cycle or non-degree course, for scholarships with this component, imply the cancellation of the candidate's application.

Academic degrees obtained in foreign countries require registration by a Portuguese Institution in accordance with Decree-Law no. 66/2018, of August 16 and Ordinance No. 33/2019, of January 25th.

The presentation of the certificate is mandatory for the signing of the contract. More information can be obtained at: <https://www.dges.gov.pt/pt/pagina/recognition?plid=374>

Applications must be sent by email to:

Professor Jorge Manuel Costa Pedro

Email: [jpedro@uevora.pt](mailto:jpedro@uevora.pt)

Departamento de Geociências,

Escola de Ciências e Tecnologia - Universidade de Évora

