



UNIVERSIDADE DE ÉVORA

IIFA – INSTITUTO DE INVESTIGAÇÃO E FORMAÇÃO AVANÇADA

DOCTORAL SCHOLARSHIP - 3 VACANCIES

09 of August of 2023

A call for tenders is open for three Scholarships Doctoral within the scope of the **WP1 - Nexus Open Data Collaboration Platform e WP3 - Smart Gates e Smart Terminals** and the **WP8 – Descarbonization – State of the art – Characterization of energetic matrix of the Porto of Sines**, of the project “Agenda Mobilizadora: Sines Nexus”, with reference “C645112083-00000059”, financed by national funds through “PRR - Plano de Recuperação e Resiliência”, under the following conditions:

Scientific area: Geography, Geography and Planning, Computer Engineering or related, Information Systems and Technologies, Geographic Information Systems or related, Environmental Engineering, Environmental Sciences, Agricultural Sciences, Agronomy or related, Electrical or Electromechanical Engineering, Renewable Energy Engineering or related.

Admission requirements:

- Degree in the areas of Geography, Geography and Planning, Computer Engineering or related, Information Systems and Technologies, Geographic Information Systems or related, Environmental Engineering, Environmental Sciences, Agricultural Sciences, Agronomy or related, Electrical or Electromechanical Engineering, Renewable Energy Engineering or related.
- Proficiency in spoken and written Portuguese and English.

Profile 1 - Knowledge/experience in the **area of geovisualization**, respectively in **Geographic Information Systems (GIS)** in a business or research context, namely in ESRI technology and ArcGIS development API's.

Profile 2 - Knowledge/experience in the **area of decarbonization and transport**, namely in data collection and processing (surveys, bibliographic research and fieldwork) for the calculation of greenhouse gas (GHG) emissions. Experience in the context of studies in the areas of sustainability, maritime and land transport, decarbonization, energy and energy efficiency.

The following will also be valued:

- Knowledge of programming languages and databases, such as: Javascript, HTML5/CSS3, MVC .Net C#, Rest/JSON, SOAP, Python, Java Spring Framework, Node.JS, React, SQL Server, Oracle, PostgreSQL;
- Knowledge in operating systems, communications and data security; Ability to conceptualize architectures and specifications technical design and ability to understand, analyse and optimize information flows that support business needs and processes;





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- Participation in projects or work in the areas of each of the profiles;
- Experience in data processing and information systems;
- Experience in dissemination activities of scientific results and publication of scientific papers in indexed international journals or technical articles.
- Knowledge of port activity.

The application package should include detailed information on the profile of the candidates, with explicit reference to the candidate's experience in the areas and context indicated, including, but not limited to, the grade obtained in the degree.

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:

Profile 1:

Participation in the definition of requirements and development of the component of WP1 - Geo-Visualization of the Shared Data Platform and WP3 - Smart Berth of the Nexus Agenda of the Port of Sines, namely:

- Analysis of available bibliography;
- Benchmarking visits to ports with experiences in the area of geovisualization (GIS component) and smart ports;
- Survey of the Port's activity and processes that require the geovisualization component;
- Survey of requirements and end users of the different products that need the geovisualization component;
- Collaboration in the development of a Geovisualization Platform for the Open Data Platform of the NEXUS Agenda;
- Collaboration in the development of other Products, in a flexible enough way to provide visualization capabilities for both the internal customer (other WP products that need geovisualization instances) and the external customer (external users).
- Collaboration in the digitalization of processes through mobile applications, using a rapid development model, leveraging the existing technology in Porto (namely ESRI mobile application development tools and Data Portal/webservices/visualizations). Examples include asset inspection processes, meter readings (water, gas, energy, other), environmental inspections and other similar processes.
- Collaboration in the development of process efficiency improvement, real-time monitoring and inclusion of collected data in data products.
- Collaboration in the development and monitoring of the WP3 Smart Berth platform.



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Profile 2:

Participation in the definition of requirements and development of methodology for the assessment of consumption and GHG emissions in the Port of Sines, namely:

- Analysis of available bibliography;
- Benchmarking visits to ports with similar study experiences;
- Collection of consumption/emissions data from the Port of Sines Administration and concessionaires;
- Monitoring and data collection on GHG concentration (existing sensors in the Port, drones and other instruments);
- Spatial analysis of emissions;
- Characterization of energy consumption in buildings and respective consumption patterns by building typology;
- Calculation of consumption/emissions in buildings;
- Characterization of vehicle types (land and sea) and their energy consumption patterns;
- Calculation of consumption/emissions in land and sea transport;
- Characterization of the energy matrix of the Port of Sines and modelling until 2050.

Profile 1 and 2:

In parallel:

- Participation in national and international technical and scientific meetings;
- Support in the preparation of interim reports and collaboration in the final report;
- Monitoring of project evaluation indicators;
- Elaboration of scientific articles for publication in indexed international journals;
- Organization and participation in dissemination actions;
- Organization of workshops and seminars.

Applicable legislation and regulations: The granting of the Research Scholarship will be carried out upon the signing of a contract between the University of Évora and the scholarship holder, as set in the template [former.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://files.dre.pt/2s/2019/12/24100000/0009100105.pdf> and other applicable rules.

Place of work: The work will be developed at IIFA - Instituto de Investigação e Formação Avançada/MED-CHANGE of the University of Évora, under the scientific guidance of the Professor Maria Teresa Folgôa Batista.

Duration of the scholarship(s): The scholarship will have a duration of 12 months, starting on october of 2023. The scholarship contract may be renewed until December 2025 or until the end of the budget allocation of the funding project.



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Amount of monthly maintenance allowance: The amount of the scholarship corresponds to € 1 199,64, according to the table of scholarships awarded directly by FCT, I.P. in Portugal (https://www.fct.pt/wp-content/uploads/2023/02/Tabela-de-Valores-SMM_2023.pdf), payments being made monthly, by check or bank transfer.

Selection methods: The selection methods to be used will be the following: Curricular evaluation and Interview (in case of decision of the Jury), in which case the valuation will be 12 values (60%) for the curricular evaluation and 8 values (40%) for the interview.

Composition of the Selection Jury:

President: Professor Maria Teresa Folgôa Batista
1st Member - Professor Fátima de Jesus Folgôa Batista
2nd Member - Professor. Adélia Sousa
1st Alternate - Professor Carlos Pinto Gomes
2nd Alternate - Professor José Rafael Silva

Advertising/notification of results: The final results of the evaluation will be publicized, through an ordered list by final grade obtained posted in a visible and public place IIFA - Instituto de Investigação e Formação Avançada, being the candidate 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 25 of August to 18 of September of 2023 and the results of the selection will be published by 22 of September of 2023.

Applications must be formalized, obligatorily, by sending an **application letter** with the following documents: **Curriculum Vitae, certificate of qualifications, reference or recommendation letters**.

For the purposes of application, the evidence may be replaced by a declaration of honor 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 matriculation 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>



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Applications must be sent by email to:

Professor Maria Teresa Folgôa Batista

IIFA - Instituto de Investigação e Formação Avançada da Universidade de Évora

e-mail: mtfb@uevora.pt;

and

Raquel Fragoso Gonçalves Batista Freixial

Serviços de Ciência e Cooperação

e-mail: raquel.freixial@uevora.pt