

IIFA – INSTITUTO DE INVESTIGAÇÃO E FORMAÇÃO AVANÇADA

DOCTORAL SCHOLARSHIP - 3 VACANCIES

08 of january of 2024

A call for tenders is open for three Doctoral Scholarships within the scope of WP1 - Nexus Open Data Collaboration Platform and **WP3 - Smart Berth of the Nexus Agenda of the Port of Sines and WP8 - Decarbonization - State of the Art - Characterization of the Energy Matrix of the Port of Sines** of the Research Project called "Mobilizing Agenda: Sines Nexus", with reference "C645112083-00000059" co-financed by the "PRR - Recovery and Resilience Plan"), under the following conditions:

Scientific area: Geographical Information Systems or related, Electrical Engineering or related, Computer Engineering, Renewable Energy Engineering or related, Environmental Engineering or related, Agricultural Engineering or related, Mechatronics Engineering or related, Forestry Science or related.

Admission requirements:

Master's degree in Geographic Information Systems or related fields, Electrical Engineering or related fields, Computer Engineering, Renewable Energy Engineering or related fields, Environmental Engineering or related fields, Agricultural Engineering or related fields, Mechatronics Engineering or related fields, Forestry Science or related fields.

Proficiency in spoken and written Portuguese and English is essential.

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 APIs.

Profile 2 - Knowledge/experience in the area of decarbonization, transport and energy, namely in data collection and processing (surveys, bibliographical research and fieldwork) for calculating gaseous 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;
- Design of technical specifications and ability to understand, analyze and optimize information flows that support business needs and processes;
- Participation in projects or work in the areas of each of the profiles;
- Experience in disseminating scientific results and publishing scientific articles in indexed international journals or technical articles.



- Knowledge of port activity.

The application dossier must include detailed information on the candidates' profile, with explicit reference to the candidate's experience in the areas and context indicated, namely, among others, the classification obtained in the master's degree and, participation in projects, work and publications developed and produced previously.

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:

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

- Analysis of available bibliography;
- Benchmarking visits to ports with experience in the area of geovisualization (GIS component) and smart ports;
- Survey of the Port's activity and the 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 way that is flexible enough to provide visualization resources for both the internal client (other WP products that need geovisualization instances) and the external client (external users).
- Collaboration in digitizing processes through mobile applications, using a rapid development model, leveraging 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, others), environmental inspections and other similar processes.
- Collaboration in the development of process efficiency improvements, real-time monitoring and inclusion of collected data in data products.
- Collaboration in the development and monitoring of WP3's Smart Berth platform.

Profile 2:

Definition of requirements and development of methodology for assessing consumption and GHG emissions at 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 concession companies;
- Monitoring and collecting data on GHG concentrations (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 type;
- 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 transportation;
- Characterization of the energy matrix of the Port of Sines and modelling up to 2050.

Profile 1 and 2:

In parallel:

- Participation in national and international technical-scientific meetings;
- Supporting the preparation of interim reports and collaborating on the final report;
- Monitoring the project's evaluation indicators;
- Preparation of scientific articles for publication in indexed international journals;
- Organizing and participating in dissemination actions;
- Organizing 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/2019/12/241000000/0009100105.pdf> and other applicable rules.

Place of work: The work will be developed at IIFA - Instituto de Investigação e Formação Avançada 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 February of 2024. The scholarship contract may be renewed up to December 2025 or until the end of the funding project's budget allocation.

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.



UNIVERSIDADE DE ÉVORA

Selection methods: The selection methods to be used will be the following: Curriculum evaluation 20 points (100%) and Interview (if necessary), in which case 12 points (60%) will be awarded for the curriculum evaluation and 8 points (40%) for the interview.

Composition of the Selection Jury:

President: Prof. Maria Teresa Folgôa Batista

1st Member - Prof. Fátima de Jesus Folgôa Batista

2nd Member - Prof. Adélia Sousa

1st Substitute - Prof. Carlos Pinto Gomes

2nd Substitute - Prof. José Rafael Marques da 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 at 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 12 to 26 of January of 2024 and the results of the selection will be published by 31 of January of 2024.

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

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 enrollment 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:

Prof. Maria Teresa Folgôa Batista

IIFA - Instituto de Investigação e Formação Avançada of the University of Évora

email: mtfb@uevora.pt e raquel.freixial@uevora.pt