



Department of Informatics
NOVA Laboratory for Computer Science and Informatics (NOVA-LINCS)
Research Grant - 1 vacancy

27 of October of 2022

A call for tenders is open for **1 Scholarship Master Research Grant** within the scope of the project of Financing of Research Unit, Reference: UIDP/04516/2020 (NOVA LINCS: Programme Funding 2020-2023), co-financed by Foundation for Science and Technology, under the following conditions:

Scientific area: Informatics

Admission requirements:

- Master Degree in Computer Science or similar
- Frequency of a PhD course in Computer Science or similar
- Knowledge of Database Technologies, Relational Model
- Understanding of the Portuguese language, written and spoken
- Knowledge of Natural Language Processing Tools and OWL Ontologies / Graph-oriented Databases, as a preferred factor

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:

1. Development of 3 tools for extracting information from text descriptions from ISAD(G) elements, regarding the representation of events and entities in CDOC-CRM ontology, in the context of the Portuguese Archival records, in particular to those that describe baptisms, marriages, deaths, passports requisitions, and incorporations or transfers of materials.

- a. The information extraction process of semi-structured texts is defined using the GATE platform.
 - b. Build a tool using BERT fine tuned on the task of information extraction using the datasets manually built, with the information intended to be extracted.
 - c. Using an existing tool that performs ontology based information extraction in a pipeline that uses STANZA, a dependency parser, a DRSs builder, develop a tool to extract information from free text where the semantic interpretation of a sentence is done in a domain ontology as a multi objective optimization problem. The domain ontologies are built in the context of the types of information to be extracted.
2. Evaluate the 3 tools using the manually built datasets, identify possible problems, and improve their performance.
 3. Prepare a final report in which the experience is described.
 4. Participate in the writing of a scientific article for submission to a scientific conference.

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 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 Research Centre NOVA LINCS of the University of Évora, under the scientific guidance of the Profs. Irene Pimenta Rodrigues and Dora Melo.

Duration of the scholarship(s): The scholarship will have a duration of 6 months, starting on January of 2023. The scholarship contract may be renewed up to (ex.) a maximum of 6 months or until the end of the funding project's budget allocation.

Amount of monthly maintenance allowance: The amount of the scholarship corresponds to €1144,64, 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:

- Curriculum evaluation (60%)
- Adequacy of training to the work plan (40%)

Composition of the Selection Jury:

President: Prof Irene Pimenta Rodrigues

1st effective member – Prof Dora Regina Oliveira Melo

2nd effective member – Prof. Salvador Pinto Abreu Ferreira

1st alternate member – Prof. Francisco Coelho

2nd alternate member - Prof. Vasco Pedro

Advertising/notification of results: The final results of the evaluation will be publicized, through an alphabetically ordered list posted in a visible and public place Department of Informatics of University of Évora, being the candidates 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 7 to 21 of November of 2022 and the results of the selection will be published by 30 of November of 2022.

Applications must be formalized, obligatorily, by sending an application letter with the following documents: Curriculum Vitae and other supporting documents considered relevant.

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. Irene Pimenta Rodrigues

Department of Informatics of the University of Évora

email: ipr@uevora.pt