

(BL83/2022-IST-ID)

Research Studentships (Master or Integrated Master students)

Applications are open for 1 Research Studentship(s), within the framework of project/R&D institution Sense and Sensibility in Interactivity / Interactive Technologies Institute, EXPL/ART-DAQ/1444/2021, financed by national funds through FCT/MCTES (PIDDAC):

Scientific Area: *Metodologia e Tecnologia da Programação; Sistemas de Informação.*

Admission Requirements: *To be enrolled at an integrated master or a master.*

Workplan: The successful candidate is expected to perform within a multi-disciplinary team working in human-computer interaction, environmental education, and nature conservation while developing one operational prototype. The scholarship will focus on the technical development and implementation of one high-fidelity digital prototype designed to mediate interactions with nature-rich environments whilst using a general-purpose programming language such as C/C++. Activities include: (1) bi-weekly meetings with Doctor Mara Dionísio, project supervisor for this scholarship; (2) the development and user-testing of one operational prototype using an open-source electronic prototyping platform such as Arduino; (3) development of a short report detailing the technical specifications and capabilities of the prototype; (4) publication of the code used to create the prototype using a hosting platform for version control such as GitHub.

The role of a computer engineer is fast expanding. Besides the development, management, and maintenance of software and the development of increasingly faster solutions, today's engineers are keen to apply their skills in developing ideas that have the potential to foster community engagement and learning. This scholarship will appeal to students wishing to further their knowledge of the methodologies and technologies of programming information systems while at the same time participating in an environmental education project which is timely and socially relevant.

Through the concept development, design, testing, and evaluation of interactive digital technology for embodied and tangible interaction in nature-rich environments, the project proposes to test a novel approach to promoting nature connection amongst teenagers (age 13 to 17). The general hypothesis is that informal learning modes that merge outdoor activities with outdoor exploratory activities can enhance our awareness of the natural world. As natural habitats become exposed to human activity's adverse effects, there is a growing need to connect younger generations to nature. By combining design-led research with environmental psychology and nature conservation, the SSI project proposes the design of interactive technology to mediate sensory, experiential, and aesthetic experiences in nature-rich environments.

Legislation and Regulations: Statute of Scientific Research Fellow, approved by Law nr. 40/2004, of August 18, as worded by Decree-Law nr. 123/2019, of August 28; FCT Regulation for Research Studentships and Fellowships, available on <https://www.fct.pt/apoios/bolsas/docs/RegulamentoBolsasFCT2019.pdf> and <https://dre.pt/application/file/a/127230968>.

Workplace: The work will be developed at the Interactive Technologies Institute (ITI, <https://iti.larsys.pt>) of LARSyS – Laboratory for Robotics and Engineering Systems under the scientific supervision of Doctor Mara Dionísio, Researcher at ITI and Guest Professor at the University of Madeira.

Duration: The research fellowship(s) will have a duration of 9 months. It's expected to begin in June 2022. The contract is nonrenewable.

Monthly maintenance allowance: According to the values for Research Fellowships awarded by FCT in Portugal (<http://www.fct.pt/apoios/bolsas/valores>), the amount of the monthly maintenance allowance is € 875,98, being the payment method an option of the Fellow by Wire Transfer/Check. This value can be complemented with social

security reimbursement if the researcher subscribes to the voluntary SSV according to the Portuguese Law – Lei Nº. 202/2012, de 27 de Agosto.

Selection methods: The selection methods will be (1) evaluation of curriculum and motivation letter and (2) an individual interview, with the respective weight of 50% each. Therefore, the selection of a successful applicant is a two-stage process. In both stages, there will be an evaluation of applications based on evidence of good programming skills, namely, the ability to write quality, production level code with one or more general-purpose programming languages, including but not limited to C/C++, as well as proficiency in programming for electronics with platforms such as Arduino. The interview is designed to allow all applicants to further expand on the evidence in their written application, irrespective of gender, race, or disability status. The jury will rank-order the applications and decide on the selected applicant based on both elements. Note that the jury may choose not to award the grant if no suitable applicant is found.

Composition of the selection Jury:

Professor Nuno Nunes, Full professor at Técnico U. Lisbon and the President of the Interactive Technologies Institute (ITI) a research unit part of the LARSYS Associated Laboratory.

Doctor Mara Dionísio, Project Researcher, Researcher at ITI/LARSYS and Guest Professor at the University of Madeira.

Doctor Sónia Matos, Project Principal Investigator, Lecturer at The University of Edinburgh and Research Affiliate at ITI/LARSYS.

Announcement/ notification of the results: The final evaluation results will be communicated to all applicants by email.

Deadlines and procedures of complaint and appeal. A complaint may be lodged from the final decision within 15 working days, or an appeal to the Executive Board of IST-ID within 30 working days, both counted from the respective notification

Application deadline and formalization: The call is open from the May 31 until June 15, 2022.

It is mandatory to formalize applications with the submission of the following documents: i) B1 Form – Fellowship application (<https://ist-id.pt/concursos/bolsas/>); ii) *Curriculum Vitae*; iii) academic degree certificate, where applicable; iv) proof of enrollment at an academic degree course (Master, Integrated Master); v) motivation letter;

Applications must be submitted to the email: drh@bolsas.tecnico.ulisboa.pt