(BL124/2025-IST-ID)

Research Studentships for PhD students

Applications are open 1 Research Studentships for PhD students, within the framework of project/ within the framework of project/1801P.01515 - StreamWater, in the institution IST-ID, reference no. 2024.07282.IACDC/2024, financed by national funds through FCT/MCTES (PIDDAC), under the following conditions:

Scientific Area: Civil Engineering

Admission Requirements: *To be enrolled at a PhD* programme and have experience using the Python programming language

Workplan: Development of code in the Python programming language for: (i) the integration of a computational application for calculating the energy balance in a pilot platform for collecting data (flow, pressure and energy) from an existing distribution network; (ii) calculation of the different components of the energy balance and energy efficiency indicators in real time; (iii) visualization of the temporal evolution of these indicators in real time; and (iv) integration of an algorithm for identifying anomalous behaviors with a view to improving the operation of pumping stations and valves.

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 CERIS (Civil Engineering Research and Innovation for Sustainability) of Instituto Superior Técnico, under the scientific supervision of Profª Dídia Covas.

Duration: The research fellowship(s) will have the duration of 7 months. It's expected to begin in June 2025. The scholarship contract may be renewed for a maximum of 12 months, including the duration of the initial contract.

Monthly maintenance allowance: According to the values for Research Fellowships awarded by FCT in Portugal (https://www.fct.pt/fct-atualizou-o-valor-das-bolsas-para-2025/), the amount of the monthly maintenance allowance is € 1309,64, being the payment method an option of the Fellow by Wire Transfer/Check.

Selection methods: The selection methods may be solely curricular, with the following components and respective weightings: (i) average of the grades obtained in the curricular part of the doctorate with a minimum of 30 ECTS (30%); (ii) professional experience in research projects and activities and specialized consultancy in the area of water efficiency, energy efficiency and optimization of hydraulic systems (40%); (iii) letter of motivation (30%). If necessary, an individual interview may be conducted, which will be calculated as an arithmetic average with the previous curricular component.

Composition of the selection Jury: Prof.ª Dídia Isabel Cameira Covas (president), Prof.ª Marta Sofia Ferreira Martins Mota Cabral (member), Prof.ª Helena Margarida Machado da Silva Ramos (member), Prof. Jorge de Saldanha Gonçalves Matos (member substitute).

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 May 7 until May 20, 2025.

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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 (PhD); v) motivation letter;

Applications must be submitted to the email: didia.covas@tecnico.ulisboa.pt

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