

Research Studentships for Master or Integrated Master students

Applications are open for 1 Research Studentship, within the framework of 1801P.00961.1.01 - IN+ UIDP/50009/2020 - IST-ID, financed by national funds through FCT/MCTES (PIDDAC), under the following conditions:

Scientific Areas: Applied Mechanics and Aerospace; Engineering and systems management; Information systems

Admission Requirements:

- a) *To have a degree in Engineering*
- b) *To be enrolled at an integrated master or a master.*
- c) *Interest in advanced Earth observation systems*

Workplan: Research in space technology and policy, with emphasis on Earth observation for sustainability (i.e., climate change mitigation, biodiversity preservation) and security (i.e., food security, water security, energy security, citizens security), together with the emerging trends for Carbon mapping and monitoring towards carbon stocking and sequestration in the context of “net zero” policy issues. It considers the development of novel land management systems together with innovative data analytics and advanced information systems, integrating novel sensors oriented to carbon mapping and modelling. It must consider soil characterization and the potential development of new sensors for carbon analysis along soil depth (50 cm, below surface) and land vegetation (2 m above surface), as well as sub-metric satellite imagery.

This should be done together with the development of a few “case studies” in quite diversified landscapes, including in the North of Portugal (<https://www.lifemaronesa.eu/projeto/programa-life/>; Geres National Park; Douro Valley; Northeastern Portugal), in Italy, in USA (e.g., Harvard Forest) and in the Global South, with emphasis in Brasil (Brazilian biomes) and in tropical African forest. The goal is to integrate a multidisciplinary and multi-institutional team, together with specific and detailed “case studies/pilot projects” to help building the necessary data acquisition, modelling and validation capacity to address the complex issues associated with the identification/quantification/preservation carbon stocks and the development of carbon sequestration strategies, as well as novel land management systems.

The collaborative program would focus on the development of new markets for data analytics making use of high- and very high-resolution satellite imagery (i.e., sub-metric) using advanced information systems fed by image data analysis, including the use of methods of Artificial Intelligence, together with the development of new sensors for soil characterization.

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 IN+ of Center for Innovation, Technology and Policy Research of IST-ID, under the scientific supervision of Professor Manuel Heitor

Duration: The research fellowship(s) will have the duration of 12 months, expected to begin in February 2024. Not renewed.

Monthly maintenance allowance: According to the values for Research Fellowships awarded by FCT in Portugal (https://www.fct.pt/wp-content/uploads/2023/02/Tabela-de-Valores-SMM_2023.pdf), the amount of the monthly maintenance allowance is € 930.98, being the payment method an option of the Fellow by Wire Transfer/Check.

Selection methods: The selection methods will be the following: *Curriculum evaluation, with the respective assessment of curricular excellence (40%) and relevant experience for the project (40%). The best-ranked candidates in the curriculum evaluation will be invited (if necessary) to an individual interview, with the respective weight of 20%.*

Composition of the selection Jury: Manuel Heitor (IST/IN+), Joana Mendonça (IST/IN+), Edgar Fernandes (IST /IN+)

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 January 24 until February 6, 2024.

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: jobs@in3.tecnico.ulisboa.pt