

(BL201/2024)

Research Studentships (for PhD students)

Applications are open for 1 Research Studentship, within the framework of project PRODUTECH R3 (Recuperação-Resiliência-Reindustrialização) - Agenda Mobilizadora da Fileira das Tecnologias de Produção para a Reindustrialização, financed under invitation notice n. 02/C05-i01/2022 framed and financed under the Recovery and Resilience Plan of Portugal, under the following conditions:

Scientific Area: Scientific Area of Mechanical Design and Engineering Materials

Admission Requirements: *To be enrolled at PhD, preferably in Mechanical Engineering area.*

Workplan: The work plan is part of WP9 SmartIL Plataforma e Soluções Robóticas Interoperáveis Inteligentes de Intralogística e Controlo Qualidade para a Indústria of the PRODUTECH R3 Agenda (Recovery-Resilience-Reindustrialisation). The dynamics of today's economy require organizations to be prepared to face changes and transformations with the least possible impact. The main objective of this work plan is to implement the necessary tasks to address the following research question: What factors influence the optimization of warehouse operations related to the automation of truck unloading and item sorting, and how do these automation solutions, implemented at industrial partner storage facilities, impact the efficiency of inventory management, accuracy in item categorisation, and overall logistics performance?

The tasks to be carried out include:

- 1) Analysis of Current Warehouse Operations
- 2) Automation Solution Evaluation
- 3) Operational Efficiency Measurement
- 4) Impact on Labor and Resource Allocation
- 5) Inventory Management and Item Categorization
- 6) Cost-Benefit and Competitiveness Analysis
- 7) This work plan should be relevant to the progress of studies related to the PhD on the following topics: Product design and development of systems, Logistics and technology adoption.

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; IST Research Fellowships Regulation, available on https://drh.tecnico.ulisboa.pt/files/sites/45/despacho_8532_regulamento_bolsas.pdf.

Workplace: The work will be developed at Scientific Area of Mechanical Design and Engineering Materials of IST, Pav Mec 2 of IST, under the scientific supervision of Prof Marco Leite.

Duration: The research fellowship(s) will have the duration of 12 months. It's expected to begin in January 2025 and may be eventually renewed up to the end of the project, with the limit of 48 months, including the duration of the initial contract.

Monthly maintenance allowance: the amount of the monthly maintenance allowance is € 1 259,64 being the payment method by Wire Transfer.

Selection methods: The selection methods to be used will be the following: curriculum evaluation (70%) and letter of motivation (30%). In the case of several candidates, there will be an interview with the top 3 classifieds where the winning candidate will be chosen.

Composition of the selection Jury: Chairman of the Jury: Prof. Marco Leite; Member of the Jury: Prof. Paulo Peças; Member of the Jury: Prof^a Ines Ribeiro

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 within 30 working days, both counted from the respective notification

Application deadline and formalization: The call is open from October 16 until October 29, 2024.

It is mandatory to formalize applications with the submission of the following documents: i) B1 Form – Fellowship application (<http://drh.tecnico.ulisboa.pt/bolseiros/formularios/>); ii) *Curriculum Vitae*; iii) academic degree certificate, where applicable; iv) proof of enrollment at an academic degree course ; v) motivation letter;

Applications must be submitted to the email: carina.tavares@tecnico.ulisboa.pt