

(BL191/2024)

## ANNOUNCEMENT FOR THE ATTRIBUTION OF SCHOLARSHIPS IN THE SCOPE OF R&D PROJECTS AND INSTITUTIONS

### Research Studentship for master's degree or Integrated Master's Degree 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 Manufacturing and Industrial Management

#### Admission Requirements:

- a) *Be enrolled in an integrated master's programme or a master's programme.*
- b) *Be available to carry out a master's thesis in Lean Manufacturing e Lean&Green in an Industry 4.0 context.*
- c) *Have developed work or have knowledge in digitalization or Internet of Things or Lean Manufacturing.*

**Workplan:** The work plan is part of WP8 - Digital&Autonomous Factory - of the PRODUTECH R3 Agenda (Recovery-Resilience-Reindustrialisation).

Manufacturing industries face the challenge of achieving high levels of operational and environmental performance while maintaining very short deadlines to respond to a highly dynamic demand. On the other hand, technology producers face the challenge of developing equipment and software solutions, applicable to SMEs and scalable for larger companies, that can accommodate large product mixes and significant demand fluctuations, without compromising operational and environmental efficiency, with a constant focus on digitalization and integration in IoT environments (ensuring high performance in communication and data processing systems).

This project interconnects the challenges and needs of these two types of companies. Whilst doing so, it contributes to the Reindustrialization of Europe, by demonstrating the application/potential of high performance Visual, Digital, Autonomous and Sustainable production systems, which are based on process digitalization and autonomous mobile robotic systems, aiming to minimize waste (operational, energy and materials) and ensure operational excellence. The following solutions will be demonstrated in several companies from different sectors:

- 1) Adaptive and intelligent logistics solutions focused on the automation of manufacturing processes at all scales (micro-production and mass production, indoor and outdoor);
- 2) Machine learning based software for application of Visual Management based on Lean Six Sigma and Multi-Layer Flow Mapping, both in IoT and cloud-based environments.

The workplan includes the activities required to accomplish the objectives and deliverables of this program. Promotion activities are also planned, through conferences, articles and others:

- Conducting data acquisition with companies to gather functional requirements;
- Develop efficiency diagnosis as well as maturity analysis;
- Support to the management of project activities.

This work plan is relevant to the progress of studies related to the course that does not confer an academic degree, related to the increase of scientific competences and research methods.

**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](https://drh.tecnico.ulisboa.pt/files/sites/45/despacho_8532_regulamento_bolsas.pdf).

**Workplace:** The work will be developed at Scientific Area of Manufacturing and Industrial Management, Pav Mec 3 of IST, under the scientific supervision of Prof Paulo Peças.

**Duration:** The research fellowship(s) will have the duration of 12 months. It's expected to begin in October 2024, and may be eventually renewed up to the maximum of 24 months, including the duration of the initial contract.

**Monthly maintenance allowance:** the amount of the monthly maintenance allowance is € €990.98, being the payment method by Wire Transfer.

**Selection methods:** The selection methods will be the following: In the first phase, 3 candidates will be selected based on their CV and letter of motivation with a weighting of 80% and 20% respectively. The candidates selected in the first phase will then be selected through an individual interview.

**Composition of the selection Jury:** Chairman of the Jury: Prof. Marco Leite, Member of the Jury: Prof. Paulo Peças, Member of the Jury: Prof<sup>a</sup>. Inês 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 (Master, Integrated Master); v) motivation letter;

Applications must be submitted to the email: [carina.tavares@tecnico.ulisboa.pt](mailto:carina.tavares@tecnico.ulisboa.pt)