

Cofinanciado por:



**Designação do projecto** | UpReGain: Gamified brain-machine interfaces for personalized upper-limb post-stroke rehabilitation.

**Código do projecto** | Reference - 2023.13809.PEX

**Objectivo Principal** | The main goal of the UpReGain project is to conduct a pilot study on stroke patients to design, develop, and evaluate innovative and personalized rehabilitation strategies that combine brain-computer interfaces, virtual reality, and a robotic hand exoskeleton, focusing on the upper limbs of post-stroke patients.

**Região de intervenção** | Centro

**Entidade beneficiária** | Institute of Systems and Robotics - University of Coimbra (ISR-UC)

**Data de aprovação** | 22/11/2024

**Data de início** | 13/02/2025

**Data de conclusão** | 12-08-2026

**Custo total elegível** | 49 999,83€

**Apoio financeiro da União Europeia** |

**Apoio financeiro público nacional** | Foundation for Science and Technology (FCT)

**Síntese do Projecto:** Stroke is a leading cause of disability and the second leading cause of death worldwide, affecting millions of people each year, and only 15% of patients fully recover and return to normal life. The UpReGain project uses a BCI-based rehabilitation system to enhance the effectiveness of motor rehabilitation. Additionally, it aims to automate the rehabilitation process for home use and enable telerehabilitation. The BCI system is designed to detect patients' movement intentions, which will then be executed by either a robotic hand exoskeleton or a virtual hand. The rehabilitation tasks will be gamified, as gamification has enhanced patient motivation and engagement, thereby facilitating motor recovery. This research project is a collaboration between the Institute of Systems and Robotics - University of Coimbra (ISR-UC) and Coimbra Local Health Unit (Unidade Local de Saúde de Coimbra - ULS).

**Parceiros:** Institute of Systems and Robotics - University of Coimbra (ISR-UC) and Coimbra Local Health Unit (Unidade Local de Saúde de Coimbra – ULS).

**Link do Projecto:** <https://sites.google.com/view/upregain/p%C3%A1gina-inicial>

**Logotipo do Projeto:**

