



Call for applications for the assignment of 1 research fellowship grant for carrying out Category B research activities, as per Article 22 of Italian Law No. 240/2010, for the Scientific Disciplinary Sectors of BIOS-06/A – Physiology and IBIO-01/A – Bioengineering, at the facilities of the CIR - Integrated Research Centre and of the Departmental Faculty of Medicine and Surgery of Università Campus Bio-Medico di Roma.

Call Code: ASS-RIC/29_24

Departmental Faculty	Medicine and Surgery
Research theme in English	Development and validation of a neurostimulation platform for studying the neurophysiology of upper limb proprioception and the modulation of the embodiment of prosthetic systems
Brief description of the research in English	<p>The research will optimize an innovative robotic platform to deliver non-invasive neurostimulation during active tasks. Techniques to optimize the effectiveness of the stimulation will be investigated and new controls for the robotic manipulators used will be developed. Physiological signal recording systems will be integrated. The administration of stimulation protocols will be automated. The platform will be tested on both healthy and amputee subjects, aiming to study the role of proprioception in motor control and to understand the effects of using advanced prosthetics.</p> <p>The activity requires:</p> <ul style="list-style-type: none">- Knowledge of control algorithms for human-robot interaction- Recording and analysis of neurophysiological signals (EMG, skin conductance, ECG)- Ability to integrate systems with different communication interfaces (serial, UDP, etc.)- Skills in designing clinical research protocols.
Scientific Supervisor	Prof. Giovanni Di Pino
Scientific Disciplinary Sectors	BIOS-06/A – Physiology and IBIO-01/A – Bioengineering
Language knowledge and skills	English - level B2/C1
Date of the interview	19th September 2024, at 10:30 am Remote candidates on Microsoft Teams platform