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 Sector of BIOS-06/A – Physiology, 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/37_24

Departmental Faculty	Medicine and Surgery
Research theme in English	Smart Algorithms for Neurostimulation and Motor Control in Prosthetic and Robotic Applications
Brief description of the research in English	The research will focus on developing and applying AI algorithms to extract features from physiological signals (e.g. Motor Units, time-frequency EEG classification) that can identify changes in motor control resulting from the use of advanced prostheses and supernumerary arm devices that integrate proprioceptive feedback. Intelligent algorithms will also be used to automate the administration of neurostimulation protocols within an innovative robotic platform. This platform will be tested on both healthy and amputee subjects to study the role of proprioception in motor control. The activity requires: • Recording and analysis of neurophysiological signals (EMG, high density EMG, EEG) • Knowledge about AI algorithm for features extraction and for the automation • Skills in designing and leading research protocols. • Knowledge about physiological protocols of neurostimulation.
Scientific Supervisor	Prof. Giovanni Di Pino
Scientific Disciplinary Sector	BIOS-06/A – Physiology
Language knowledge and skills	English B2 – C1
Date of the interview	**25th November 2024, at 2:00 pm** Remote candidates on Microsoft Teams platform

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