



The Neural Rehabilitation Group is seeking for “Juan de la Cierva” candidates

We are seeking a highly motivated individual to perform post-doctoral research in the Neural Rehabilitation Group (<https://www.neuralrehabilitation.org/en/>) at the Cajal Institute, in Madrid, Spain.

The main task of the candidate will be to support and guide the current research activities carried out by the group in the field of hybrid FES-robot technologies, in particular combination of neuroprosthetics and exoskeletons for medical applications. The successful candidate will play a leading role in developing innovative and creative solutions for a) design and development of new biomechatronic and neuroprosthetic platforms, b) the analysis and assessment of neuromotor functions in healthy and pathologic population in a wide range of motor functions.

The candidate (PhD defense from 01/01/2020 to 31/12/2021) will need to apply to the Call “2021 Juan de la Cierva-FORMACION contracts”:

<https://www.aei.gob.es/convocatorias/buscador-convocatorias/ayudas-contratos-juan-cierva-formacion-2021>

Duration of the contract: 2 years

Call deadline: 03/02/2022

Candidates must have a PhD degree in Engineering (Mechanical, Robotics, Electronics, Mechatronics or equivalent) and first-author publications in peer-reviewed journals. Research experience in control/robotics/mechatronics will be valuable. **Send CV and motivation letter to Dr. J.C Moreno (jc.moreno@csic.es) before the 20th January, 2022.**

Selected publications:

- Koelewijn AD, Audu M, Del-Ama AJ, et al. Adaptation Strategies for Personalized Gait Neuroprosthetics. *Front Neurobot.* 2021;15:750519. Published 2021 Dec 16. doi:10.3389/fnbot.2021.750519
- Pascual-Valdunciel A., González-Sánchez M., Muceli S., Adán B., Escobar V., Pérez-Sánchez R., Ki Jung M., Schneider A., Hoffmann K.P., Moreno J.C. Grandas F., Farina D., Pons J.L., Barroso F.O.. Intramuscular stimulation of muscle afferents attains prolonged tremor reduction in essential tremor patients. *IEEE Transactions on Biomedical Engineering.* 2021. 10.1109/TBME.2020.3015572.
- Asín-Prieto, Guillermo; Martínez-Expósito, Aitor; Barroso, Filipe O.; Urendes, Eloy J.; Gonzalez-Vargas, Jose; Alnajjar, Fady S.; González-Altied, Carlos; Shimoda, Shingo; Pons, Jose L.; Moreno, Juan C. Haptic adaptive feedback to promote motor learning with a robotic ankle exoskeleton integrated with a video game. *Frontiers in Bioengineering and Biotechnology.* 8. 113. 2020.
- Müller, Philipp; Del Ama, Antonio J.; Moreno, Juan C.; and Schauer, Thomas. Adaptive multichannel FES neuroprosthesis with learning control and automatic gait assessment. *Journal of NeuroEngineering and Rehabilitation.* BioMed Central. 17. 1. 1-20. 2020.
- Gil-Castillo, J.; Alnajjar, F.; Koutsou, A.; Torricelli, D.; Moreno, J. C.. Advances in neuroprosthetic management of foot drop: a review. *Journal of NeuroEngineering and Rehabilitation.* 17. 1. 1-19. 2020.