

Mechanical Engineer Postdoc

The R&D Team of ABLE Human Motion is currently seeking a **Mechanical Engineer with a PhD degree** to work on new exoskeleton designs and developments for community and home use.

Robotic exoskeletons are an emerging technology with the potential to assist people with lower-limb paralysis in everyday life activities, like walking outdoors and enjoying leisure time in the community and at home. However, the high cost, weight and limited performance in real-world environments of current devices restrict their use to only clinical settings. The objective of this project is to adapt the hardware of the current ABLE Exoskeleton (designed for clinical use), which offers unique characteristics in terms of weight, usability and affordability, to the challenges of real-world non-controlled environments, facilitating its use in the community and at home. Daily activities like walking in uneven terrains, climbing and descending stairs and slopes, and ambulating in narrow spaces will be envisioned with this new lower-limb exoskeleton.

Your Tasks.

- » **Design exoskeleton parts** with challenging weight, strength, usability and cost constraints.
- » **Perform engineering calculations** or simulations to ensure the design meets the required solicitations.
- » Develop **manufacturing and assembling processes**.
- » Create and review **technical drawings**, plans, and specifications.
- » Developing mechanical models for simulating human-exoskeleton performance in different movement tasks.
- » **Prototyping and assembling** exoskeleton parts (mechanical and electronic).

Required qualifications.

- » **PhD degree in the field of Mechanical Engineering or related.**
- » **Experience in Mechanical Design using SolidWorks** or similar CAD software.
- » **Experience using Finite Element Analysis (FEA)** as part of the design process.
- » Experience integrating sensors & electronics in complex mechanical assemblies.
- » **Motivated and proactive** with the ability to work independently.

- » **High-performer**, being able to get things done in a fast-paced atmosphere.
- » Proficiency in written and oral English.

Preferred qualifications.

- » Previous experience in the field of Rehabilitation Robotics.
- » Understanding of biomechanics, human gait and exoskeletons.
- » Written and oral Spanish, if possible.

What can we offer you?

- » Be part of **one of the most promising healthcare companies** in Europe.
- » Join a **young and passionate team willing to change the world**, where everybody has a voice.
- » **Flexible working hours**: we work for objectives, balancing work and personal life, with the option of doing telework.
- » **Full-time indefinite contract of employment**.
- » **Competitive compensation** according to your experience.

Other information.

- » **Office work in Barcelona, Spain.**
- » Expected incorporation in **December 2022**.
- » **Job subject to receiving funding from the Spanish Ministry of Science and Innovation** (Torres Quevedo Grant 2021 call).
- » **Apply by sending an email to hello@ablehumanmotion.com** attaching your CV with the subject "Mechanical Engineer Postdoc".

