ID: MSCA-19-LeFeber02

Discipline: Engineering and Robotics

Title: Advanced multi-material interfaces for delivering superior ergonomics on wearable robots

Abstract: There is a technological barrier that is currently interfering with the wide adoption of wearable robots. Designing the next generation of ergonomic wearable robots is challenging and requires a multidisciplinary approach. There are several factors that influence wearability and comfort when it comes to wearable robots such as Kinematic miss alignment, cuffs pressure distribution, transpiration capabilities, donning and doffing times among many others probably not yet discovered. Your role at the Robotics and Multibody Mechanics group (R&MM) at the Vrije Universiteit Brussel, will be the one of building the foundational science and methods to understand and design highly wearable multi-material interfaces that connect humans with wearable robots, with strong focus on exoskeleton/exosuit technologies. The ideal candidate should have a background in Textile, Mechanical, or Biomedical engineering preferably, but a mandatory natural passion for wearable robots. For the following two years, you will be engaged in a broad set of fields such as biomechanics of soft and hard tissue, Textile and mechanical engineering, as well as mathematical/computational modelling. R&MM group offers a creative atmosphere with highly competitive lab tools and several exoskeletons and bionic prosthesis available in the lab, ready to be used to efficiently create several possible case studies for your research.

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