



## **PhD POSITIONS IN NEUROMECHANICS AT THE UNIVERSITY OF MILANO-BICOCCA**

The University of Milano-Bicocca is offering two fully-funded PhD positions to investigate the neuromechanics of sport-related injuries and their consequences on motor control.

### **Project description**

Musculoskeletal injuries often cause both biomechanical and neural deficits. This project aims at combining innovative tools and technologies to: (1) investigate how these neuromechanical deficits affect the neural control of movement, and (2) develop and validate intelligent systems to restore sensorimotor function following injuries. Experiments will be conducted on patients with musculoskeletal damage, using tools to monitor movement biomechanics and neuromuscular activity (motion capture, bipolar and high-density EMG) in combination with non-invasive neuromodulation and modelling techniques.

### **Qualification**

Ideal candidates should be highly motivated and have a strong scientific interest in motor control.

Preferred skills: Matlab or Python programming.

Desirable but not compulsory skills: motion capture system, signal analysis, basic knowledge of biomechanics.

### **Research team**

Selected candidates will work at the School of Medicine and Surgery of the University of Milano-Bicocca, under the supervision of Dr. Cristiano Alessandro. They will be involved in collaborative projects, interacting with engineers, sport scientists, sport medicine physicians and physical therapists.

### **Positions**

#### Position 1:

PhD Program of national interest in Robotics and Intelligent Machines, under the theme “Healthcare and wellness of persons” (3 years).

- Call closing date: July 10<sup>th</sup>, 2023
- Start date: November 1<sup>st</sup>, 2023

#### Position 2:

PhD in Neuroscience (University of Milano-Bicocca)

- Call closing date: July 24<sup>th</sup>, 2023
- Start date: November 1<sup>st</sup>, 2023

### **Contacts**

Interested candidates should send an email to Dr. Cristiano Alessandro ([cristiano.alessandro@unimib.it](mailto:cristiano.alessandro@unimib.it)) and attach: CV, transcript of records, contact details of professional references.