**Internship offer**
M2 Musculo-Skeletal system, Locomotion, Exercise (MuSkLE)

**Title of the Internship:** Effects of perceived shoulder dysfunction on the biomechanics of physical performance tests for upper limbs in athletes

**Laboratory (name, n°, website):**
Laboratoire Interuniversitaire de Biologie de la Motricité – UR7424 (LIBM) [https://libm.univ-st-etienne.fr/fr/index.html]

**Research team (name, website):**
Team Sport Performance and Injury Prevention (SPIP) [https://libm.univ-st-etienne.fr/fr/equipes/spip.html]

**Supervisor to contact (name, email address):**
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**Project description including a short introduction, aim/objectives and methods/approach to be used**

In order to screen for risk of shoulder injury occurring during sport practice or to assess the effectiveness of shoulder rehabilitation, coaches and clinicians need to characterize the shoulder functions. In this context, several physical performance tests, such as the Closed Kinetic Chain Upper Extremity Stability Test, Unilateral Seated Shot Put Test or Upper Quarter Y-Balance Test, have been proposed to characterize shoulder stability, power, motor control, strength or endurance. However, whether the biomechanical mechanisms contributing to perform such tests have been investigating in healthy athletes, the biomechanical adaptations at the shoulder complex in the athletes presenting alterations in shoulder functions remain to be understood.

The aim of this research will be to study the effects of perceived shoulder dysfunction on the biomechanics of physical performance tests for upper limbs in athletes.

**References:**


**Skills required:**

Interest in shoulder biomechanics (Motion analysis, Electromyography, Dynamics, Elastography), human experimentation and programming.