

## **The International PhD Program**

### **“Science and Health in Football”**

**awards**

**1 PhD Position**

**(two-year doctoral scholarship, net 1.200 Euro per month;  
possible extension to a third year)**

**On the research topic**

**Digital support for return-to-play decisions in soccer**

#### **Research topic and project outline:**

Digital support for decision-making in elite soccer faces a double challenge: In the lead-up, data-driven algorithms struggle to provide accurate predictions of relevant outcomes due to the mismatch between many influencing factors and the limited number of cases available. A relevant example is the risk of reinjury after return to play. At the same time, in reality the decision-making process itself is still highly subjective and poorly understood. This PhD project aims to tackle both challenges in the context of return-to-play-decisions using a transdisciplinary approach.

Predicting injuries after return-to-play: In situations without clear precedent humans still outperform machines and further improvements may be realized by aggregating the subjective judgements of several individuals. Therefore, a forecasting tournament for injury risk after return-to-play in professional German soccer is envisaged to be part of the project.

Understanding how (successful) return-to-play decisions are made: Understanding the decision-making process is essential for providing adequate digital support and possibly recommendations for best practice. While this aspect has so far mainly been addressed from the perspective of sport science and rehabilitation, this project will additionally consider the psychology of human decision making.

#### **The candidate**

This transdisciplinary project in elite soccer touches on the fields of sport science, psychology, and data science. Experience with handling databases and mobile frameworks for App development is also required. Candidates with a master degree or equivalent and proven (cross-) competence in these fields are invited to apply.