



Ph.D. position (65%, 3 years) at the Institute of Sport and Movement Science (University of Stuttgart, Department of Motion and Exercise Science)

A Ph.D. position is available at the Department of Motion and Exercise Science at the University of Stuttgart, Germany. The Ph.D. position is associated with a DFG (Deutsche Forschungsgemeinschaft) funded research project entitled **“Contractile, elastic and neural contributions to stretch-shortening cycle (SSC) performance”**. The position (TV-L E13; 65%) is for three years.

In this subproject, fundamental mechanisms of the stretch-shortening cycle (SSC) need to be analyzed on isolated single muscle fibers. For this purpose, muscle fibers will be prepared and the experiments are carried out under different boundary conditions using a validated setup. Based on the experimental data, the contribution of the various mechanisms to improve performance in the SSC will be examined. The research project contributes to a better understanding of the SSC as the most important everyday type of contraction of the musculature. This not only promotes the basic understanding of human locomotion but can also be used i.e. for efficient humanoid drives with application in the field of movement science, medical engineering, robotics, and prosthetics.

Required Qualifications:

- applicants should be highly motivated and should have an excellent MSc in movement science, sport science, kinesiology, biology/physiology, neurophysiology, physics/biophysics or a related field
- high interest in physiological and neuromuscular mechanisms and biomechanics
- quantitative analysis and statistical processing of empirical data using common software (Excel, MATLAB, R, and SPSS)
- communication-, team- and good English language skills

The environment in Stuttgart enables particularly close cooperation with an interdisciplinary team of sports scientists, biologists, physicists and engineers. Women are specifically invited to apply. The University of Stuttgart further aims to hire more people with disability and also encourages them to apply for research positions.

Please submit your detailed application in PDF format by 01.02.2023 by email to Sybille Kegreiß <sybille.kegreiss@inspo.uni-stuttgart.de>.

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