



PhD at the interface of computational and experimental neuromechanics

The University of Stuttgart represents outstanding, world-renowned research and first-class teaching in one of Europe's most dynamic industrial regions. As a reliable employer, the university supports and promotes the academic careers of its researchers. It is proud of its employees, who currently come from over 100 different countries. The university is a partner for knowledge and technology transfer and focuses on multidisciplinary.

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Position ID: 1183
Application Deadline: June 30th, 2023
Anticipated Start Date: August 1st, 2023

The **Institute for Modelling and Simulation of Biomechanical Systems** at the University of Stuttgart invites applications for a full-time position as a **PhD student (f/m/d)**, 100% TV-L E13, in the field of neuromechanics.

About us

The Continuum Biomechanics and Mechanobiology research group (Prof. Oliver Röhrle) is one of the two chairs at the Institute for Modelling and Simulation of Biomechanical Systems. The focus of the group is the development and application of computational and experimental methods to investigate the neuromuscular system and related fields.

About the project and the position

This opening is part of the ERC-AdG “qMotion -- Simulation-enhanced high-density magnetomyographic quantum sensor systems for decoding neuromuscular control during motions”. The overall aim of the project is to link neurophysiology and skeletal muscle mechanics. Therefore, we aim to develop novel magnetomyographic measurement systems that allow to study the neuromuscular system non-invasively and in vivo. This is only feasible by conducting highly interdisciplinary research, which combines experimental measurements, simulation science and signal processing.

About you

With our aim to link in vivo experiments and computer simulations, we seek candidates with a strong background in at least one of the following fields:

- computational neurophysiology
- electrographic or magnetographic measurements
- electromagnetic field theory
- biological systems modelling
- bio-signal processing

Good programming skills in Matlab, Python, etc. are expected. Further, the candidate is expected to have an excellent master's degree (or equivalent) in studies with a focus in neurophysiology, biomedical engineering, civil engineering, simulation sciences, applied physics or applied mathematics. The ability to work in an interdisciplinary team, good communication skills and the willingness to take on teaching responsibilities are basic requirements.



University of Stuttgart
Institute for Modelling and Simulation of
Biomechanical Systems

Please submit your complete application via JoinUS: <https://bit.ly/3pO167t> or use the QR-Code:



If you have any questions regarding this application, please contact jobs@imsb.uni-stuttgart.de.

At the University of Stuttgart, we actively promote diversity among our employees. We have set ourselves the goal of recruiting more female scientists and employing more people with an international background, as well as people with disabilities. We are therefore particularly pleased to receive applications from such people. Regardless, we welcome any good application.

Women who apply will be given preferential consideration in areas in which they are underrepresented, provided they have the same aptitude, qualifications and professional performance. Severely disabled applicants with equal qualifications will be given priority.

As a certified family-friendly university, we support the compatibility of work and family, and of professional and private life in general, through various flexible modules. We have an employee health management system that has won several awards and offer our employees a wide range of continuing education programs. We are constantly improving our accessibility. Our Welcome Center helps international scientists get started in Stuttgart. We support partners of new professors and managers with a dual-career program.

Information in accordance with Article 13 DS-GVO on the processing of applicant data can be found at https://careers.uni-stuttgart.de/content/privacy-policy/?locale=en_US.