

The Institute of Applied Dynamics (LTD) at Friedrich-Alexander-University Erlangen-Nürnberg searches, starting at 01 August 2022, several

Student assistants (Hiwi) for supporting tasks in research in the field of experimental biomechanics

Motion capturing measurements of hand movement

The LTD works on computer based simulations and optimal control of dynamic systems with applications from robotics and biomechanics, for instance, the optimization of gait with two legs or grasping of objects. The latter is relevant within the collaborative research center 1483 “EmpkinS”. Measurements will be taken as part of this, and support will be needed from 1 to 2 student assistants.

The tasks will cover different stages in research. In the beginning, support of the measurement process is necessary. This includes preparing the environment and subject, carrying out the measurements and documenting the process. After that, the post-processing of the measurements is required, for instance labeling markers in the measurement and classifying the measurements. Further, application of evaluation methods on the data, creation of plots, diagrams and literature research will also be part of the work packages. The tasks will allow a quite extensive insight in the everyday work in research in the field of biomechanics. The workload is 10 hours a week, that can be covered by 1 to 2 student assistants. The working time can be distributed in a flexible way, as far the current task allows. A long term employment is desired. It is also generally possible to continue with a student thesis in this project.

Necessary qualifications

- technical studies (mechanical or medical engineering, or similar)
- independent working
- interest in practical research tasks



Additional qualifications (not necessary)

- first experience in programming (Matlab or similar)
- basic knowledge in biomechanics
- experience with optoelectronic measurement systems (Qualisys, Vicon, or similar)

Figure 1: Passive markers for tracking hand motion.

If you are interested send an Email with CV and a transcript of records to simon96.heinrich@fau.de.