At the Chair of Applied Dynamics in the Department of Mechanical Engineering at the University of Erlangen-Nuremberg, the following open position is to be filled as soon as possible.

postdoc researcher for biomechanics in simulation and experiment

subject

Research topics of the group are situated in the field of computational mechanics, in particular dynamics and applied mathematics with focus on the development of efficient techniques for the simulation and optimisation of dynamical and control systems with applications to modern engineering and biomechanical questions. One goal is the simulation, optimisation and optimal control of the dynamics of biomechanical systems like e.g. the lower or upper extremity in everyday or workplace-related movements and sports. Furthermore the combination of experimental biomechanics with optimal control simulation of biomechanical models is a main point of interest.
The successful candidate works in the field of computational and experimental biomechanics and develops possibilities to combine various types of biomechanical experimental data with optimal control simulations. In particular, the installation of a biomechanics laboratory comprising optical and inertial motion capturing as well as force plates and EMG sensors will be an essential part of the work. During the further procedure, experimental studies are planned and performed independently and coordinated with other team members and cooperators. The presentation of the results at international conferences and in scientific journal publications is particularly encouraged. Additionally, we offer a young, highly motivated and international team of researchers, a well equipped work environment and the possibility for scientific qualification in the sense of a habilitation is given.

qualification

Highly motivated applicants with a doctoral degree (PhD) in engineering, biomedical engineering or a related discipline are invited. Profound knowledge in dynamics, numerical methods, programming, and language skills in English are required. In addition to the interest in solving scientific problems that combine simulation and experiments, experience in clinical or experimental biomechanics (e.g. optical and inertial motion capturing, force plates or EMG sensors) is required.

The full time position (TV-L E 13) is initially limited to one year, an extension is possible. Interested candidates should send their application with the usual documents (CV, degree certificates, short summary of research interests, references and publication list) preferably via email in pdf-format to

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or to

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