Bachelor Student / HIWI Position

Optimization of Cell Culture Experiments in a Tensile-Bioreactor System

Institute Profile

The Institute of General Mechanics is an educational and research institute, teaching core and elective courses in mechanical engineering, biomedical engineering, and international master programs. Moreover, the institute runs in-house testing structural and biomechanical laboratories as well as mechanical and electrical construction workshops to provide and deliver state of the art theoretical modeling, numerical simulations, and experimental validations.

Topic

Experimental biomechanics is an interdisciplinary and challenging research topic. Since technical standards for biological tissue testing are yet to be defined by international norms, in-house developed systems are very common. In order to analyse mechanically induced cell processes on biological scaffolds, we have developed a tensile-bioreactor system providing real-time information on the displacements and forces applied to cells seeded in 2-D and 3-D scaffolds throughout the duration of the culture period. Now, we are seeking for a motivated and creative student who is interested in the field of cell culture experiments.

Tasks:

- Get familiar with the bioreactor system
- Primary cell culture from mouse Achilles Tendon
- Cell culture experiments
- Immunohistochemical methods
- Flow Cytometry

Schedule:
The start of project is in April.

Requirements

- Curiosity and motivation
- Interest and experience in cell culture laboratory
- Ability to work independently

Application

The application should include cover letter and Curriculum Vitae. (English or German)

For further information please feel free to contact me
M.Sc. Gözde Dursun
dursun@iam.rwth-aachen.de
IAM, Templergraben 64, Room 118