

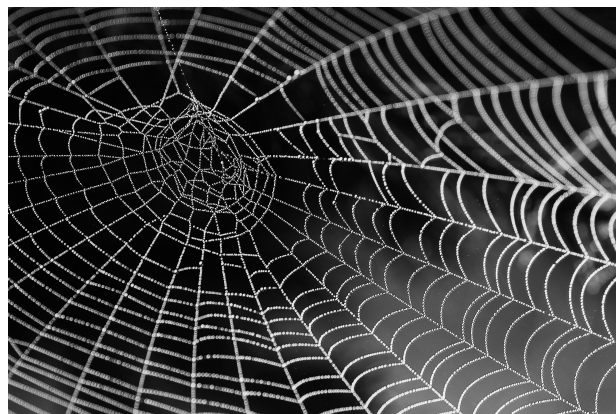
The Institute of Applied Dynamics of Friedrich-Alexander-Universität Erlangen-Nürnberg, is offering at the earliest possible time a

Bachelor / Master Thesis

with the topic

Dynamic simulations of spider nets

Spider silk is a fascinating material and subject to active research due to its special properties. In collaboration with researchers from Queensland University of Technology (QUT) in Australia, we developed a simulation model for the dynamics of small spider webs, based on a geometrically exact string model. In the next step, the code will be further developed to allow the simulation of more realistic spider webs. This includes the assembly of the net, the implementation of material laws as well as numerical aspects. The goal of this thesis is to develop a simulation model to investigate the impact of prey on the spider net.



The student will work in close collaboration with researchers at Queensland University of Technology (QUT) in Australia who are experts for spider silk.

Qualifications

- studies in the field of Mechanical Engineering, Computational Engineering, Mathematics or similar
- basic programming skills (e.g. Matlab/Python or similar)
- good written and verbal communication skills in English
- courses in mechanics

If interested, please send an E-mail to:
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