

- **Grabs, Claudia: Minimal elastic energy surfaces**

We consider deformations of elastic bodies, which we model as embeddings of compact Riemannian manifolds with non-empty boundary into another Riemannian manifold. This leads to a non-linear elliptic boundary value problem. The solutions can be seen as generalized minimal surfaces.

In this talk I want to briefly introduce the necessary background, show numerical simulations (done with SageMath) and compare the results with experiments. The experiments have been done in a collaboration with scientists from the Applied Condensed-Matter Physics group at Potsdam University.

Moreover, we derive some properties for the corresponding linearized operator.