Diplomarbeit / Studienarbeit

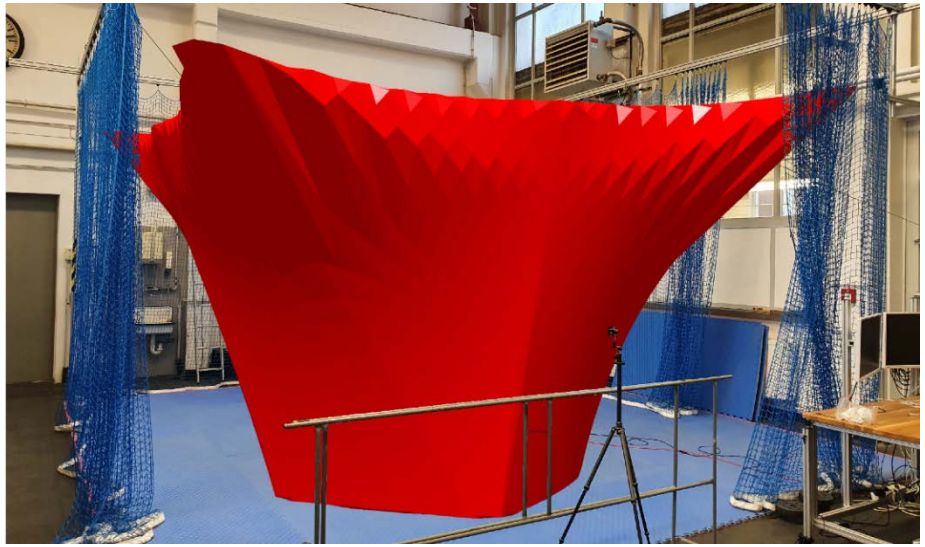
Workspace analysis for redundant cable-driven robots

Cable-driven robots are parallel kinematic systems that use flexible cables instead of rigid connecting elements. This allows large workspace to be covered at high speeds. At the Chair of Dynamics and Mechanism Design a redundant robot with more cables than degrees of freedom is being developed as part of the Ropebot project.

The aim of the work is to analyze the feasible working space for cable-driven robots of various configurations.

Possible tasks are:

- Calculation of the feasible workspace for given robot geometries
- Checking of given trajetories for feasibility
- Integration of a workspace check into the existing control system



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