



Fakultät für Maschinenwesen Institut für Festkörpermechanik

Professur für Dynamik und Mechanismentechnik

## Diplomarbeit / Studienarbeit

## General topics in the area of Cable-driven robots with variable radius drums

Cable robots are parallel kinematic systems that use flexible cables instead of rigid connecting elements. This allows large areas to be covered at high speeds. The cables are usually wound onto drums, with the drum radius determining the transmission ratio between angular speed and cable speed as well as between torque and cable force. Cable drums with variable radius allow the transmission ratio to be adjusted along the cable length

If you are interested in the following subject areas, tasks may be assigned by request:

- Robot kinematics and dynamics
- Methods of linear algebra for the description and evaluation of robotic systems
- Design and experimental validation
- Implementation of software in Python

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