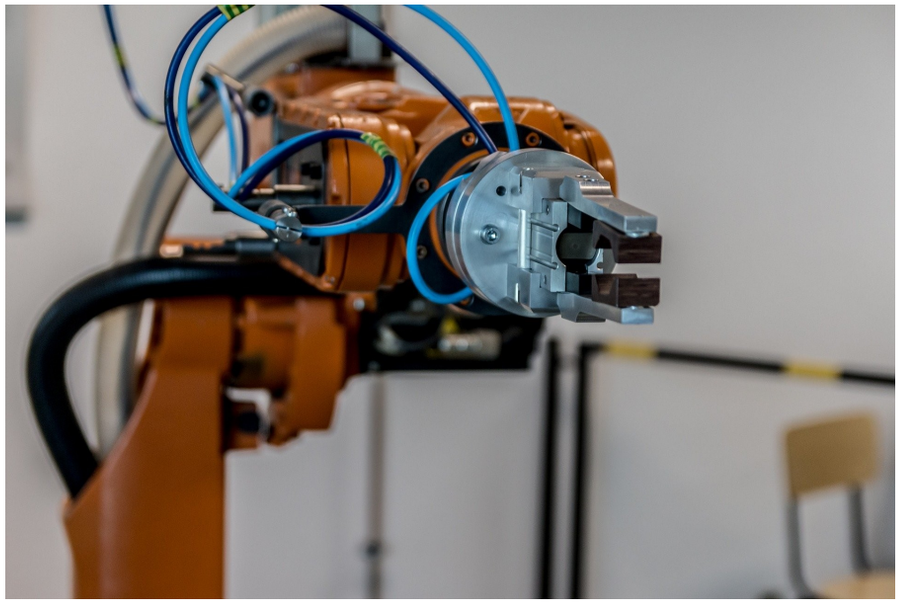
# Dynamic model for industrial robot drivetrains

**Bachelor's Thesis / Semester Thesis / Research Internship / Master's Thesis**

## Motivation:

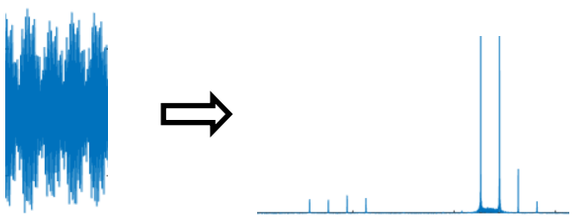
At the Institute of Machine Elements we do research on drive systems and components. Therefore, we are interested in the development and technologies of drive system and its dynamic behavior. Especially latest robots in industrial applications require drivetrains of high precision and known dynamics.



## Your task:

The goal of this project is to develop, implement and evaluate a dynamic model for an industrial robot drivetrain. As part of your work you need to analyze the robot drivetrain and derive the dynamic behavior. Challenges are the non-linear contact behavior and the kinematics of the system.

$$M\ddot{x} + C\dot{x} + Kx = f$$




## Your profile:

- Highly interested in robotics and drive systems
- Fundamental dynamic knowledge
- Highly motivated and responsible
- Fluent in English or German

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