Karlsruhe Institute of Technology

High Performance Humanoid Technologies

Modern Intelligent Hand Prostheses

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The Task

- Research of modern intelligent hand prostheses of the last 2-3 years
- Overview of the important properties
  - Design / structure
  - Kinematic / dynamic characteristics
  - Sensor feedback / embedded systems
- Comparison of the prostheses
  - What do they have in common?
  - What are special features of the different hands?
  - Do they provide intelligent functions?

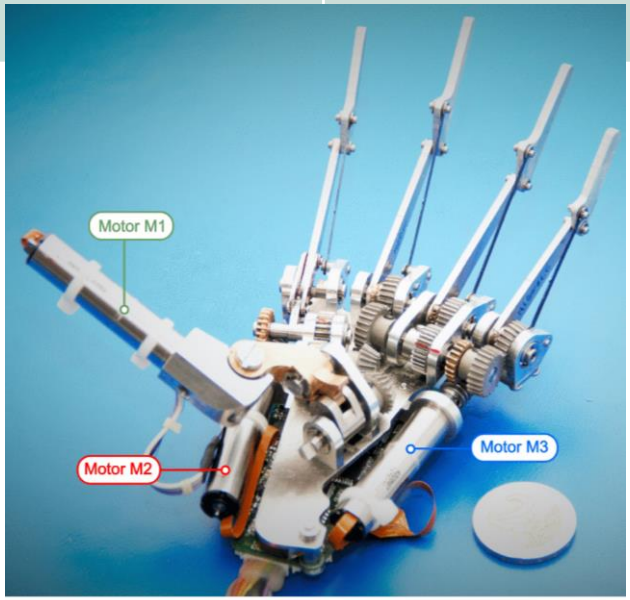
My previous work

- Searching for papers with prosthetic hands
- Summarizing the important information for each hand
- Creating a table with important properties

Example: SSSA-MyHand

Name	Developer	Year	Weight	Size	Joints	Actuators
MyHand	SSSA	2016	478 g	200x84x56 mm	10	3

Name	Integrated Actuators	Transmission	Sensors	Finger Force	Joint Speed
MyHand	Yes	Geneva drive	Position / Force	12-31N	160-250°/s



SSSA-MyHand [1]

[1] http://ieeexplore.ieee.org/abstract/document/7488269/

My future work

- Collecting more information about
  - Underactuation
  - Sensor feedback systems
  - Embedded systems

- Comparison of the prostheses
  - Common properties / features
  - Unique features