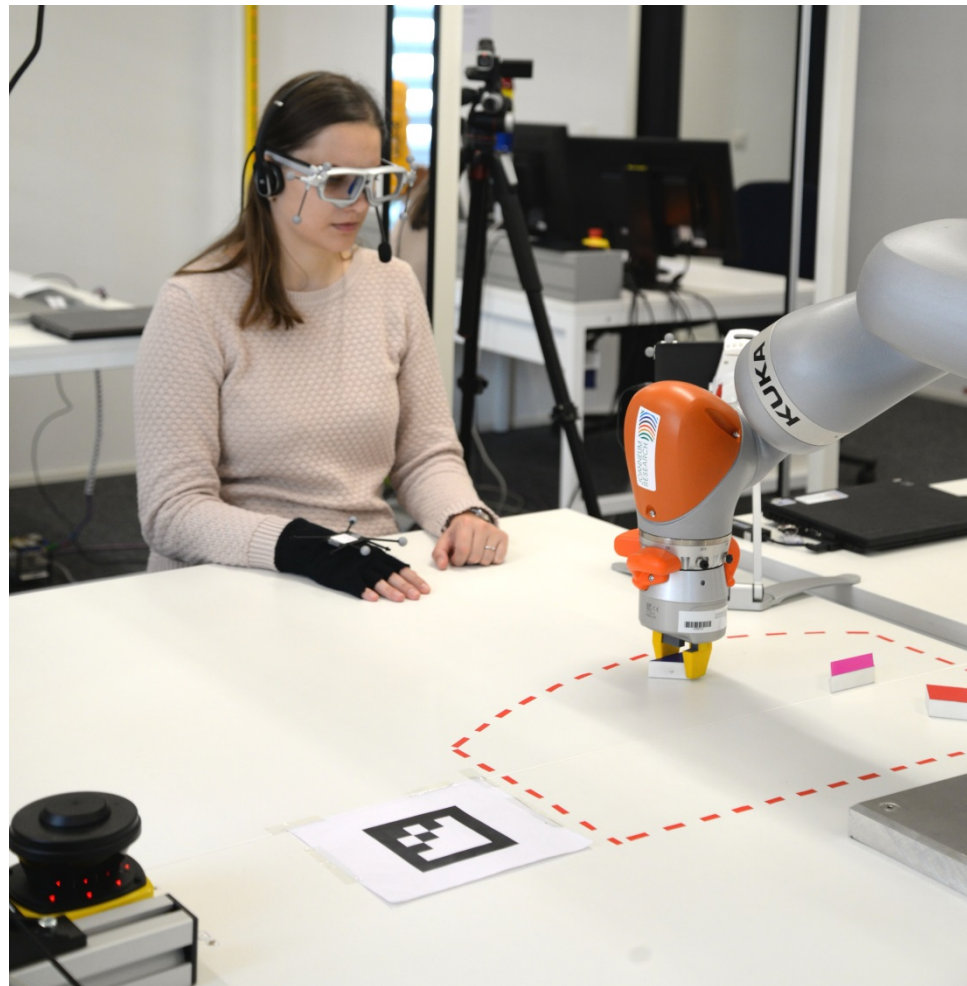


Towards Intuitive Industrial Human-Robot Collaboration



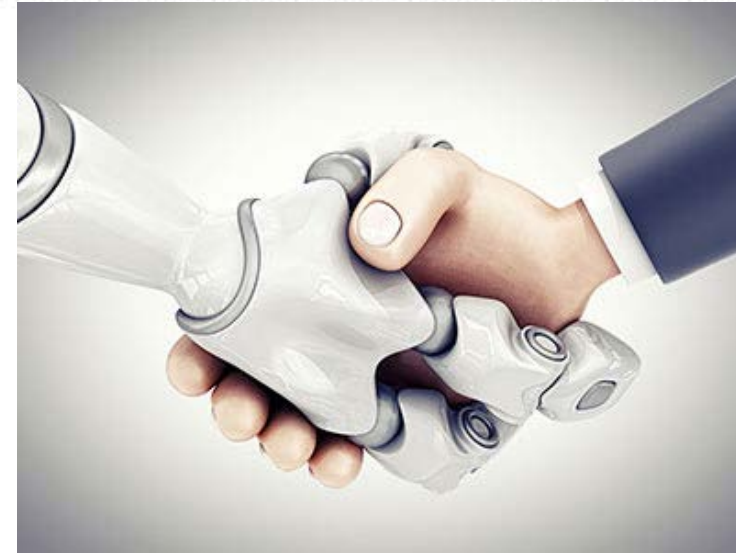
CollRob Project Overview

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Key facts

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- 4 year funded research project
- 7 research groups
- Goals:
 - Human-Robot-Collaboration
 - Intuitive interaction
 - Human-centered design
 - Newest sensor technologies
 - Design industrial application scenarios



Detailed research areas

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- Interaction
 - Context-sensitive feedback
 - Tied input modalities
- Kinematics & Safety
 - Dynamic safety zones
 - Redundant sensitive manipulation
- Planning
 - Domain-independent symbolic planning
 - dynamic interference handling

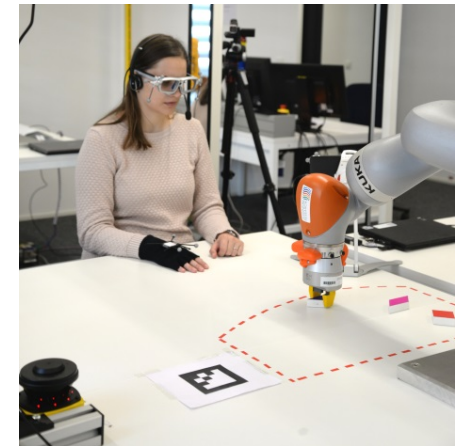


Use-Cases and Demonstrators

4

- Building collaboratively tangram figures as a representative for an assembly task in the industry
 - One Person and one serial manipulator
 - Sharing a common workspace
 - Working at the same time

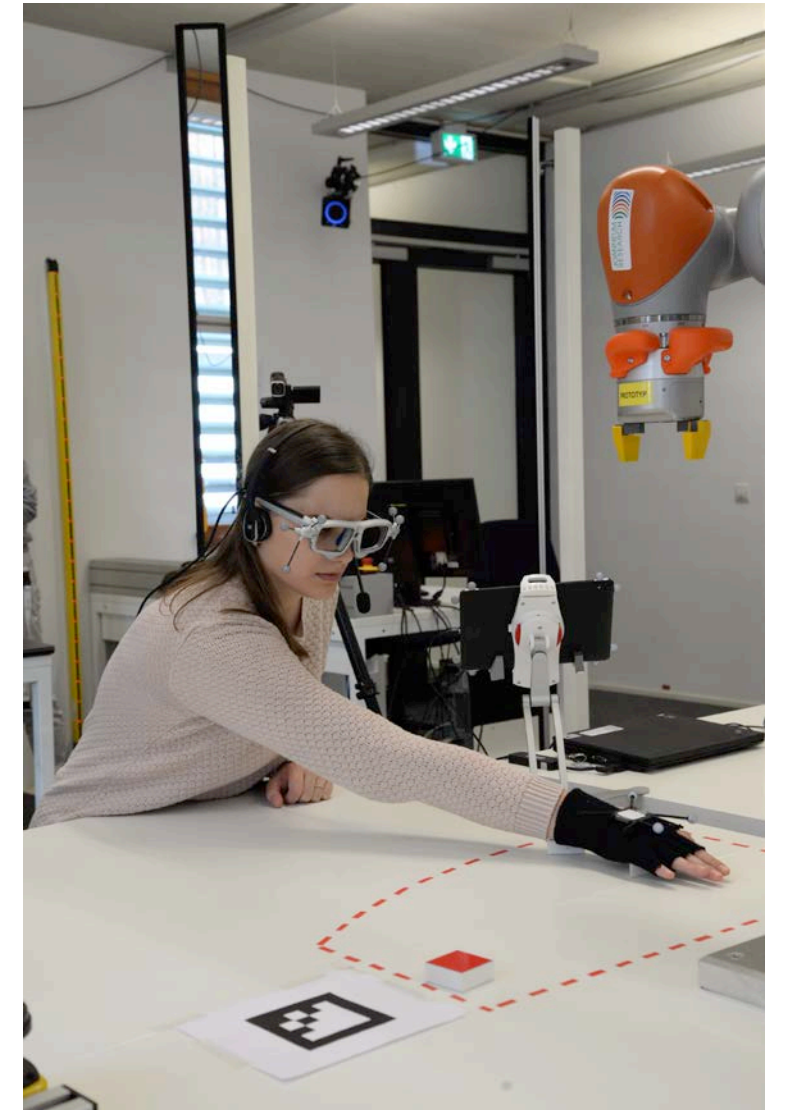
- A sensitive mobile manipulator
 - Delivering parts to workplaces
 - Moving area is shared with other humans



Status und Outlook

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- First Demonstrators finished
- Interaction study in 2018
 - Objective and subjective evaluation of the interaction system
- Automatica prototype 2018
 - Mobile manipulation scenario



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*Austrian Ministry
for Transport,
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