



Cooperative Robotic Manufacturing Station

The setup consists of several robotic arms (Staubli TX0 and TX90, 4X ABB IRB 120, KUKA LRB iiwa), end effectors (including human-robot interaction safe R800 gripper) and a mock-up of a collaborative manufacturing cell equipped with a tactile SAPARO floor. The environment can be easily configured to represent different variations of the manufacturing and robot manipulation scenarios involving both industrial robots and human operators. This installation is particularly useful for research on human-robot cooperation, multi-robot object manipulation, human tracking and detection for ensuring safety, etc. It provides unique opportunities to perform research in manipulative and collaborative robotics with bleeding edge robotic sensors (e.g. the SAPARO floor), and several different manipulators, including the human-safe ones (e.g. KUKA iiwa). As such, it is attractive not only for the research community but also for the industry (especially in the SME segment) which require innovative robotic solutions that are both flexible and safe for humans.



Key Features

- Optical sensors available for tryout including the whole Intel Realsense family (ZR300, R100, SR300)
- 4 x ABB IRB 120
- Staubli TX0 and TX90
- KUKA LRB iiwa
- KUKA R800 HRI safe gripper
- SAPARO floor
- Hokuyo UTM-30LX-EW laser rangefinder
- Kinect RGB-D camera

Possible Applications

- Multi-robot object manipulation
- Human tracking and detection for ensuring safety
- Human-robot cooperation

Access information

Corresponding infrastructure	Technical University Munich Robotics and Embedded Systems
Location	Boltzmannstraße 3, 85748 Garching bei München, Germany
Unit of access	Working day

Technical specifications

No technical specifications specified.



Additional information

- Staubli TX0 and TX90 (details can be found [here](#))
- 4 x ABB IRB 120 (details can be found [here](#))
- KUKA LRB iiwa (details can be found [here](#))
- KUKA R800 HRI safe gripper (details can be found [here](#))
- SAPARO floor (details can be found [here](#))
- Kinect RGB-D camera
- Hokuyo UTM-30LX-EW laser rangefinder (details can be found [here](#))
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