

Yamazaki Lab.

Robotic Systems Lab.



Exploring intelligent systems for use in robots

The scope of application for automated machines such as robots is expanding to various locations, including factories, everyday environments, outdoor environments, and disaster sites. These environments are not designed for automated machines. Therefore, automated machines require advanced recognition abilities to accurately grasp the objects and events around them. Additionally, they must possess the manipulation abilities to interact with their surroundings and perform beneficial tasks. The Yamazaki Laboratory aims to contribute to the maintenance and development of society from the perspective of intelligent robotics by enhancing the recognition and operational capabilities of robots.

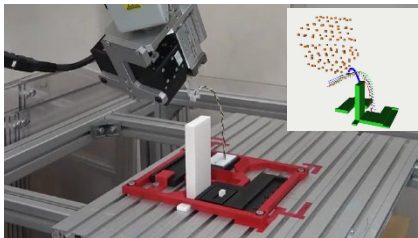
Three Main Research Topics

Deformable Object Manipulation

Systematization of modeling, recognition, manipulation



Manipulation based on state prediction



Manipulation planning of wiring

Mobile Manipulation

Intellectualization of robots with mobile bases and robot arms



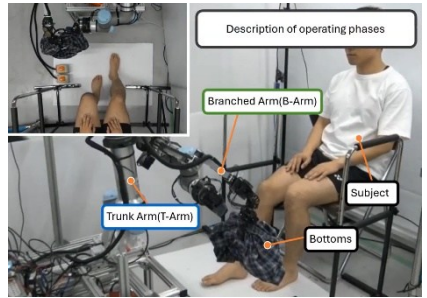
Supporting a person who are walking



Tidying up motion planning

Assisting Daily Activity

Robot systems for supporting people and assisting with tasks



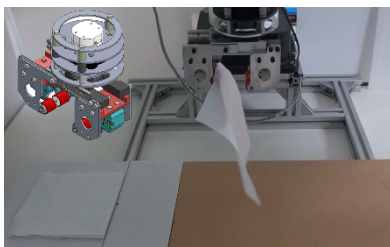
Motion assist by branched arms



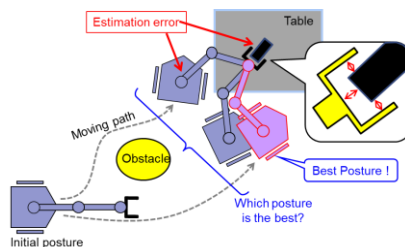
Dressing assistance

Related Research Topics

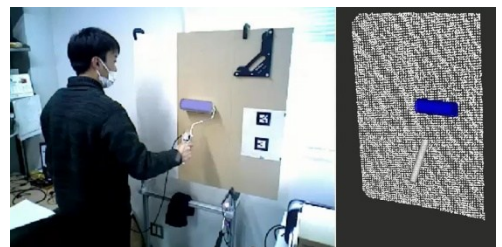
Industrial Robot Hand



Evaluation of Multi-DoF Robots



Extracting Human Work Skills



Others:

- Motion planning using foundation models
- Object recognition for factory automation
- Simulator developments for deformable object manipulation
- Human gait estimation
- Participation in robot competitions