ROS-I Meeting 2016-05-10

# Adaptive and Reactive Planning

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# Self Introduction

Kentaro Wada

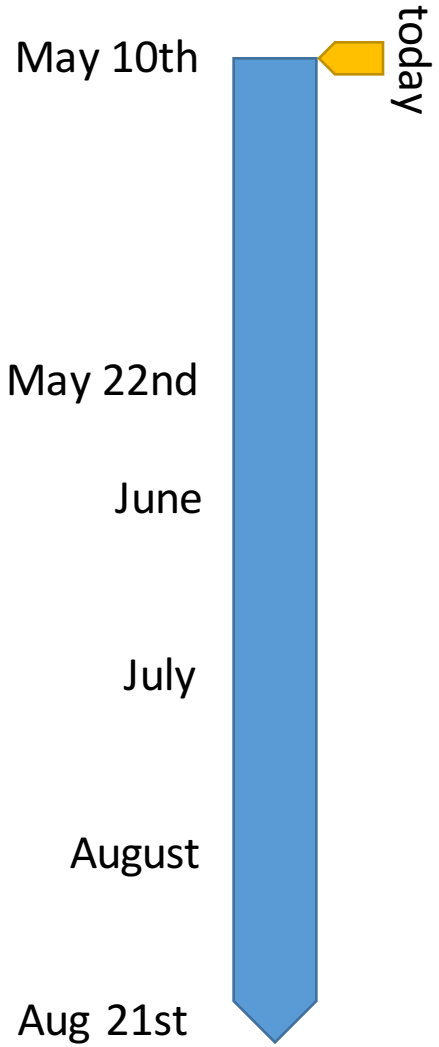
- Student for OSRF project in Google Summer of Code 2016
- Researcher in JSK lab. in UTokyo (master course from next semester)
- Interest:
  - Perception-based Planning for Robots
  - Machine Learning for Perception
- Recent Projects:
  - Amazon Picking Challenge 2015, http://github.com/start-jsk/jsk_apc
  - Bachelor thesis (2016), “Picking in clutter based on learning with experiment for perception system”

# Project Summary

Reactive and Adaptive Path Planning Using Sensor Feedback and Operator Input

1. Sensor / operator input in real/simulated world
    1. [x] Force sensor in real robot (Fanuc LR Mate 200iD)
    2. [ ] Setup simulation and force sensor plugin.
    3. [ ] Software for operator input.
2. Convert these input to be usable by planner
    1. [ ] Survey about existing planners and their acceptable inputs.
    2. [ ] Software for converting input for planner.
3. Re-planning while the execution of joint trajectory
    1. [ ] Survey about existing planners and ROS interface.
    2. [ ] Software for re-planning.
4. Demonstration
    1. [ ] Demo with simulation + force sensor
    2. [ ] Demo with real robot + force sensor
    3. [ ] Demo with simulation/real + visual sensor

# Project Schedule




1.2. Setup simulation and force sensor plugin.
2.1. Survey about existing planners and their acceptable inputs.
3.1. Survey about existing planners and ROS interface.
----. Develop a technical plan based on the above processes.

1.3. Software for operator input.
2.2. Software for converting input for planner.
3.2. Software for re-planning.
----. Plan what kinds of demo are suitable.

4.1. Demo with simulation + force sensor
4.2. Demo with real robot + force sensor
4.3. Demo with simulation/real + visual sensor
----. Summarize projects results and accomplishments.