Practical Course Robotics
Summer term 2018

In this course students get the chance to work on real robots (manipulators, mobile robots & dynamic robots), realizing the concepts learnt in the robotics lecture in real world.

Participation in this course is recommended in preparation for future theses work in robotics. The course will be conducted in English and is targeted at students of MSc Computer Science, MSc Softwaretechnik, and Msc Informatik. The course is not designed for the INFOTECH curriculum. The number of participants is limited to 12.

Contents

The course will fully take place in our robotics lab down-stairs. We will have two regular sessions a week; about 1/4 of the time we present tutorials, the rest of the time you will code for the robot. The topics we cover include, for instance,
1) Basic motion: feedback control in various task spaces,
2) Grasping & Manipulation,
3) ROS (Robot Operating System): basics, the navigation/SLAM packages,
4) Data collection and (Reinforcement) learning for basic control.
Towards the end of the course you may define an own project to work on.

The robots you work on include the TurtleBot and the WillowGarage PR2 or the RethinkingRobots Baxter. Everything will be coded in C++, using our own as well as ROS interfaces to the robots.

Prerequisites

Successful completion of the Robotics lecture is mandatory, as well as good programming skills in C++.

On any questions, please contact:
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