

Bachelor-/Masterthesis

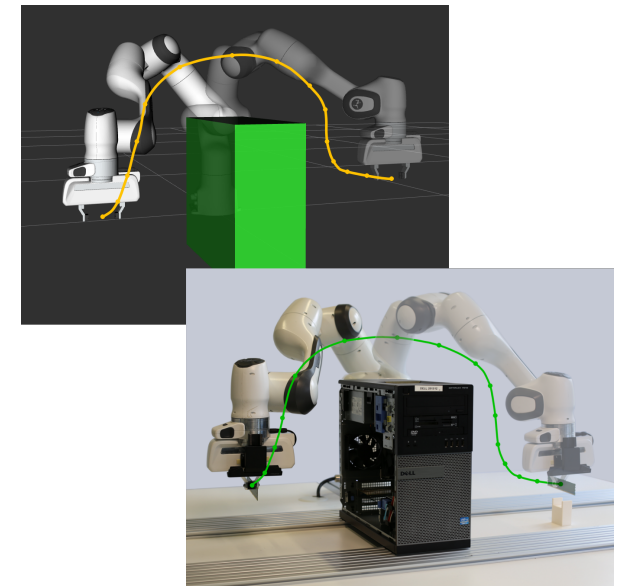
Autonomous Motion Planning for Robotic Systems

Human-Robot-Collaboration is becoming increasingly important both in industrial applications and in everyday life. The demands on a robot, which directly interacts with humans are particularly high, as it has to react quickly and precisely to changes in a dynamic environment.

Neither conventional reactive nor sampling-based motion planners are currently able to satisfy such highly demanding requirements. Therefore, we propose a combination of these two concepts in order to increase the performance and compensate for the disadvantages of the respective approaches.

Possible research in this field includes development and enhancement of the algorithm, comparison and/or development of further motion planning approaches as well as implementation, tests and experiments of the algorithms both in simulation and on a real 7-DoF collaborative robot.

Requirements: Strong programming skills (mainly C++), Basic ROS-Knowledge, Robotics (at least the lecture Robotik I or an equivalent).



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