

Master Thesis

Topic: Path planning based on graph search and post-processing in mobile robots

DESCRIPTION:

In this master thesis, a benchmark mobile robot is used to develop a new scheme in path planning based on graph search algorithms. The high-level planner is based on a graph search algorithm e.g. A* while the low level planner guarantees the smoothness and continuity of the planned path.

The high level planner should take into account dynamically moving obstacles around the robot to avoid colliding with the objects.

The localization and map nodes are realized based on Hector SLAM where a 2D map of environment as well as the location of the robot in map are provided to the planner node.

The implementation of the method is intended to be in C++. The robot is realized on ROS 1.0 platform.

REQUIREMENTS: Independent working style, good knowledge of C++, and familiarity with ROS, interest in robotics.

ROBOT: rub.de/mas/forschung/forschungsgebiete

Contact:

Dr.-Ing. Atta Oveisi

Office: ICFW 03-523

Phone: 0234/32-25877

E-Mail: Atta.Oveisi@ruhr-uni-bochum.de

www.rub.de/mas/Diploma-Master.html

Mechanik
adapiver
Systeme



Prof. Dr.-Ing. Tamara Nestorović