



Technische
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BACHELOR THESIS

Titel

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Statement of Originality

This thesis has been performed independently with the support of my supervisor/s. To the best of the author's knowledge, this thesis contains no material previously published or written by another person except where due reference is made in the text.

Braunschweig, February 12, 2023

Aufgabenstellung / Task Description

Deutsch: Aufgabenstellung

English: Task-description

Abstract

Abstract [1] [3] [2]

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1 Introduction

Motivation, applications...

1.1 Related Work

Motion planning is a crucial subject in the field of robotics. The goal is to change the initial state of a robot to a desired goal state, by performing actions which the robot is capable of. The state of the system is also called a configuration and all possible configurations a robot can be in is defined as the configuration-space. The dimension of the configuration-space gains rapidly in complexity by increasing the number of robots and static obstacles. It becomes necessary to avoid collision between those. It is difficult to engineer algorithms that explore these huge configuration-spaces and provide a sequence of actions to perform to reach the goal configuration or report failure, if the configuration is not reachable. A lot of research was done on motion planning for a great overview and detailed description of concepts you can see [3] and [4].

1.2 Contribution

2 Preliminaries

2.1 Metrics

Bibliography

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