

CSCI-4965/6963: Robot Motion Planning
Lecture 4: September 10, 2001
Configuration Space

Announcements

Homework 1 is due on Monday, September 17.

Today's Class

In the last class, we looked at representations of the translational and rotational motions of a robot for motion planning. Today we consider:

1. Computing the configuration space obstacle for a robot in 2D and 3D. We will focus primarily on the case of a translating robot.
2. Using quaternions to represent rotations in 3D for a rigid object.

Reading

Chapter 3, *Motion Strategy: Algorithms and Applications* by Steven M. LaValle. Available on the course web page. Read Sections 3.1–3.3.

Chapters 2 and 3, Latombe (optional).

Next Class

Configuration space, visibility roadmaps.