

CSCI-4965/6963: Robot Motion Planning
Lecture 16: October 25, 2001
Nonholonomic Motion Planning

Announcements

- There will be no final exam for the course.
- Final course project proposals are due on November 5.

Today's Class

Today we look at *nonholonomic robots* and techniques to perform motion planning for such systems. The primary example of nonholonomic robots we will consider are car-like robots. Other related systems are tractor-trailers, hovercraft, and satellites.

1. Nonholonomic robots and constraints
2. Maneuvers for a car-like robot
3. Two-phase nonholonomic motion planning

Reading

Chapter 9, Latombe.

Chapter 7, *Motion Strategy: Algorithms and Applications* by Steven M. LaValle. Available on the course web page.

Next Class

Nonholonomic motion planning