

CSCI-4290/6290: Robot Motion Planning
Lecture 19: November 4, 2005
Nonholonomic Motion Planning 2

Announcements

- Assignment 5 is due on November 7.
- Final course project proposals are due on November 11.

Today's Class

Today we continue our discussion of *nonholonomic robots* and motion planning techniques for such systems. We also look at the use of Lie brackets to determine whether a system is nonholonomic.

1. Lie brackets
2. Integrability, Frobenius theorem
3. Discretized planning (Barraquand and Latombe)

Reading

Chapter 12, Choset et al.
Chapter 15.4–15.5, LaValle.

Next Class

Multiple robot coordination