

CSCI-4965/6963: Robot Motion Planning
Lecture 2: August 30, 2001
Geometric Representations

Today's Class

1. Geometric representations of obstacles and robot. Must have convenient representations to plan motions and detect when the robot is colliding with the obstacles.
2. Polygonal representation
3. Polyhedral representation
4. Logical predicates for collision checking
5. Semi-algebraic representation
6. Other representations

Reading

Chapter 2, *Motion Strategy: Algorithms and Applications* by Steven M. LaValle. Will be available on course web page.

Chapter 3, Latombe (optional).

Next Class

Geometric transformations and configuration space representations.