

CSCI-4290/6290: Robot Motion Planning
Lecture 2: August 29, 2003
Geometric Representations

Today's Class

1. Geometric representations of obstacles and robot. Creating convenient representations to plan motions and detect when the robot is colliding with the obstacles.
2. Polygonal representation
3. Logical predicates for collision checking
4. Semi-algebraic representation
5. Introduction to Configuration space

Reading

Chapter 3, Choset et al.

Chapters 3 and 4, *Planning Algorithms* by Steven M. LaValle.

Chapters 2 and 3, Latombe (optional).

Next Class

Configuration space representations and geometric transformations.