

CSCI-4290/6290: Robot Motion Planning
Lecture 2: September 2, 2005
Geometric Representations

Today's Class

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

Reading

Chapter 3 and Appendix F, Choset et al.
Chapters 3 and 4, LaValle.

Next Class

Configuration space representations and geometric transformations.