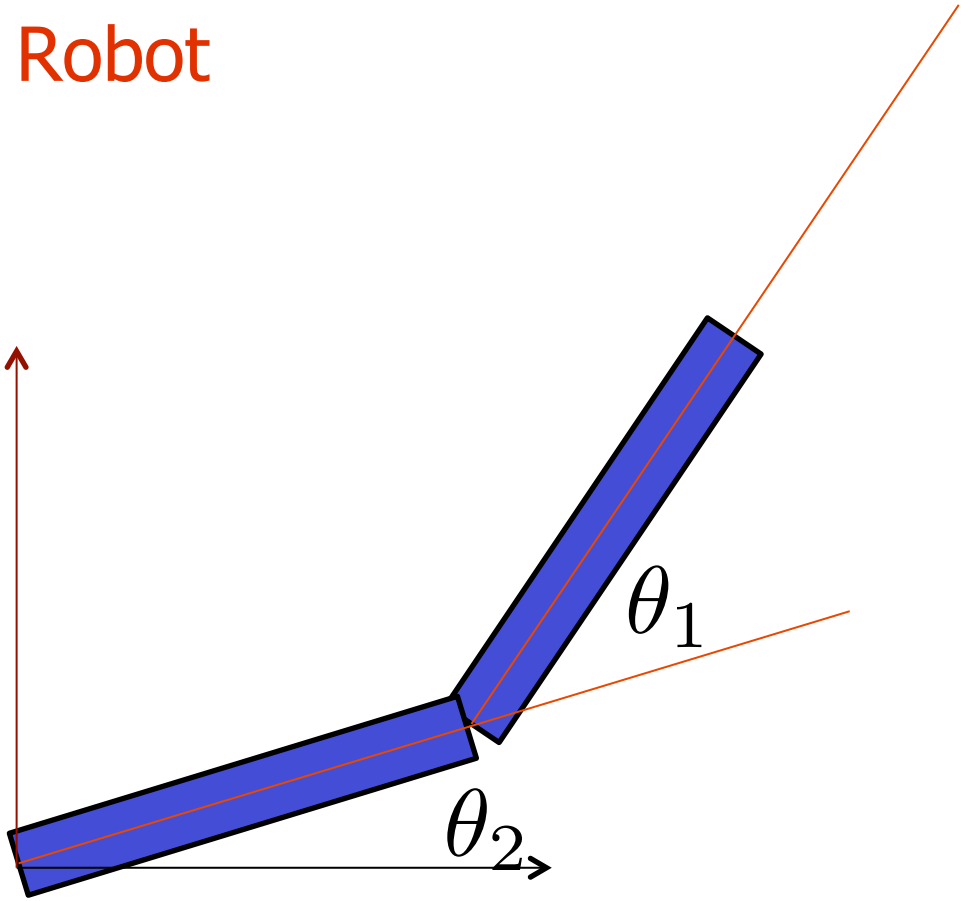
RR Arm

SECTION 2.2

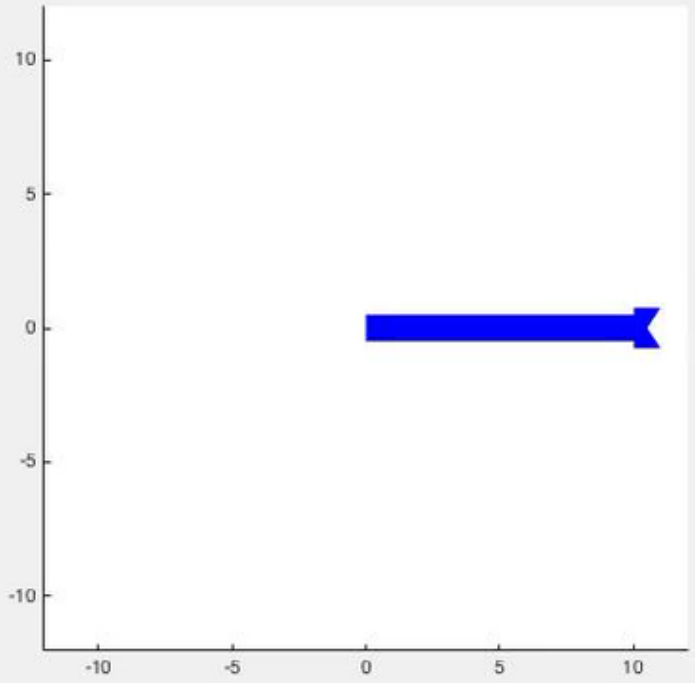
Penn

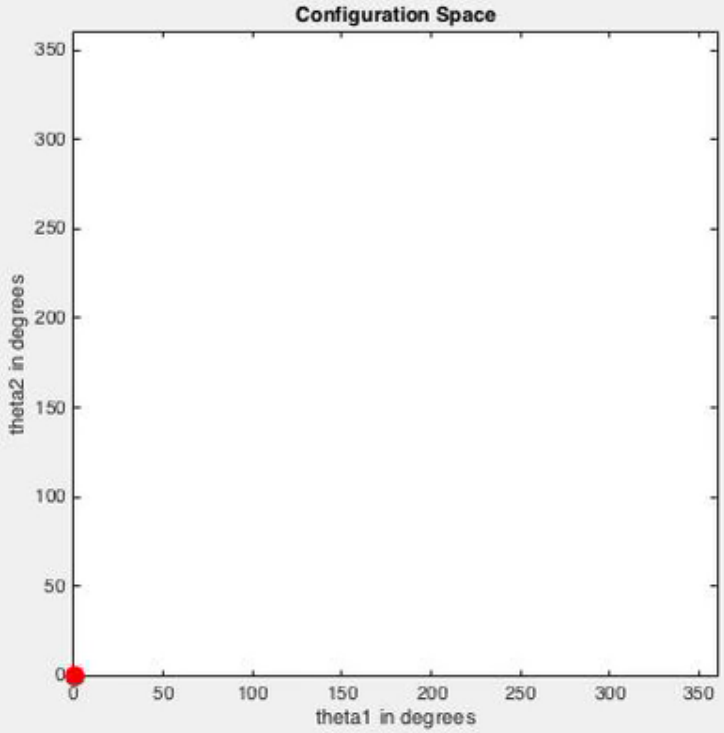
- Configuration space is a general concept can be applied to lots of robots
- This slide shows a simple planar arm with two revolute joints Marked 1 and 2.
- Here again we can think of all of the possible configurations of this robot and associate them with a tuple of joint angles (theta_1, theta_2).
- In this case the two angles can freely range from 0 to 360 degrees.
- This movie shows our planar 2 link robot moving around along with the corresponding trajectory in configuration space

Two Link Planar Robot



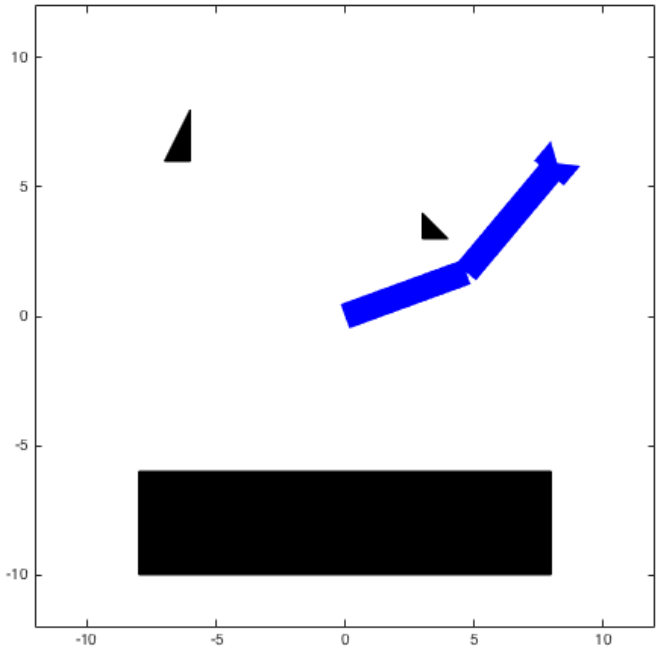
Two Link Robot + Configuration Space

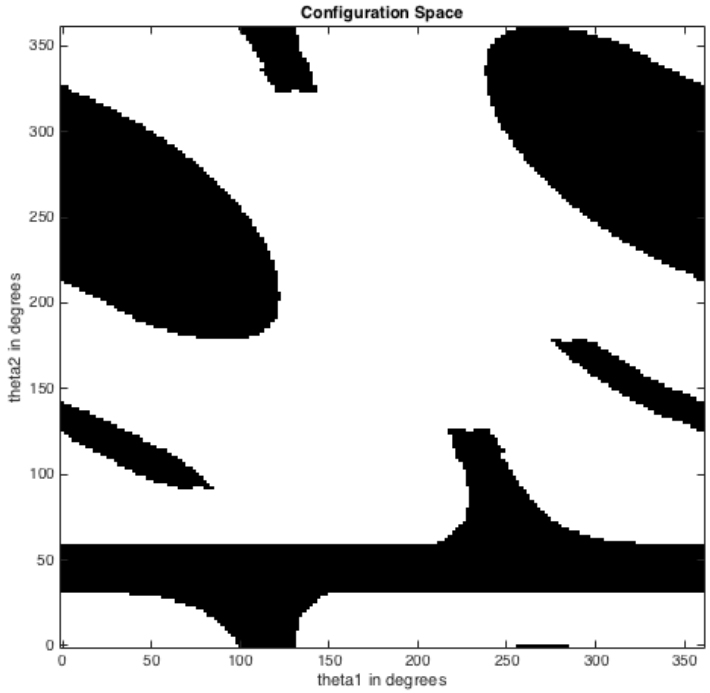




- Once again we can introduce obstacles into the environment and consider which configurations become infeasible because of collision.
- This figure shows the robot, the obstacles and the corresponding situation in configuration space
- Note that because of the way we have chosen coordinates for C-Space the simple polygonal obstacles actually turn into interesting looking c-space obstacles.

Configuration Space Obstacles for RR Arm





Planning Trajectory for 2 Link Arm