

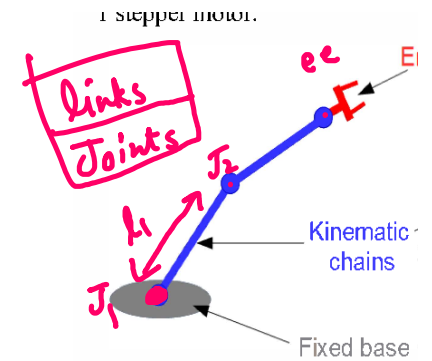
How Robotic Arms Work

Tuesday, 21 September 2021 10:46 AM

Type of Manipulator

Serial / Chain

Parallel

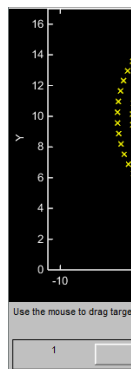
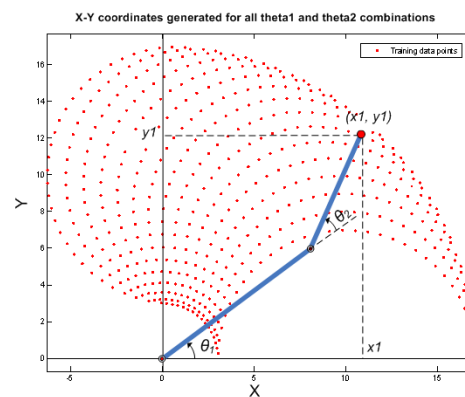
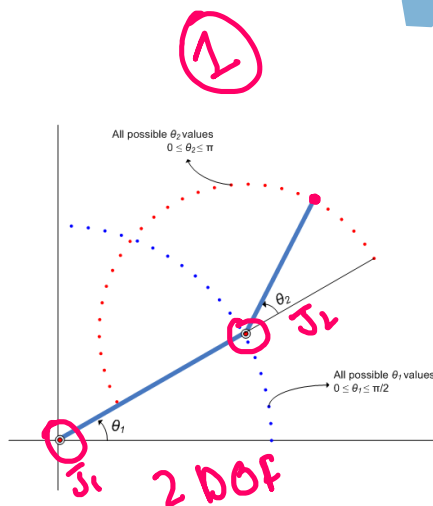


<https://www.semanticscholar.org/paper/Design-and-kin>

[Yeshmukhametov-Kalimoldayev/84c59267845cb6477c](https://www.semanticscholar.org/paper/Design-and-kin-Yeshmukhametov-Kalimoldayev/84c59267845cb6477c)

Task Space

Workspace



<https://www.mathworks.com/help/fuzzy/modeling-inverse-kinematics-in-a-robotic-arm.html>

Kinematics

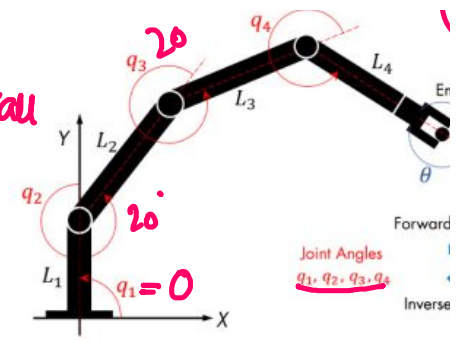
30

- Forward

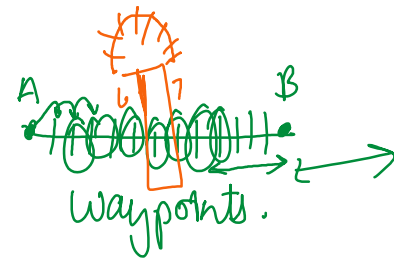
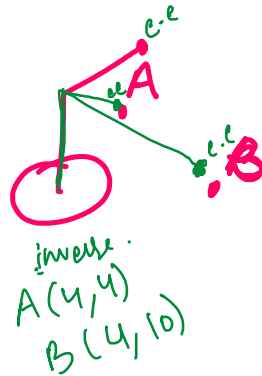
$$Q_{all} \rightarrow EE(n, y, \theta)$$

- Inverse

$$EE(n, y) \rightarrow Q_{all}$$


<https://www.mathworks.com/discovery/inverse-kinematic>

Trajectory Generation

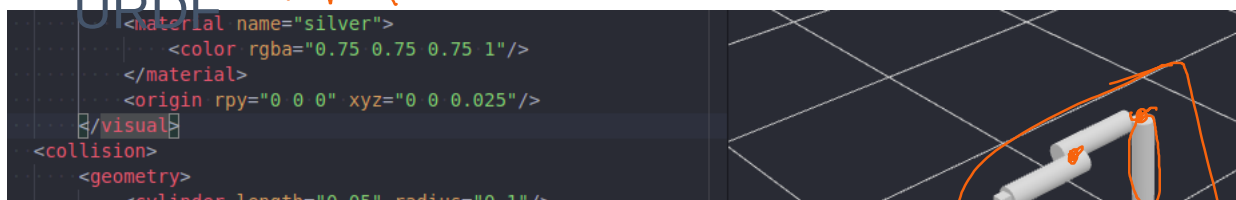


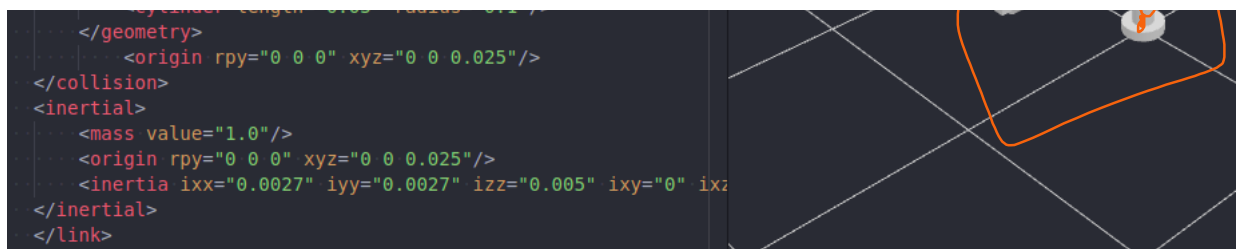
ROS (only simulation

1- Robot Design or download

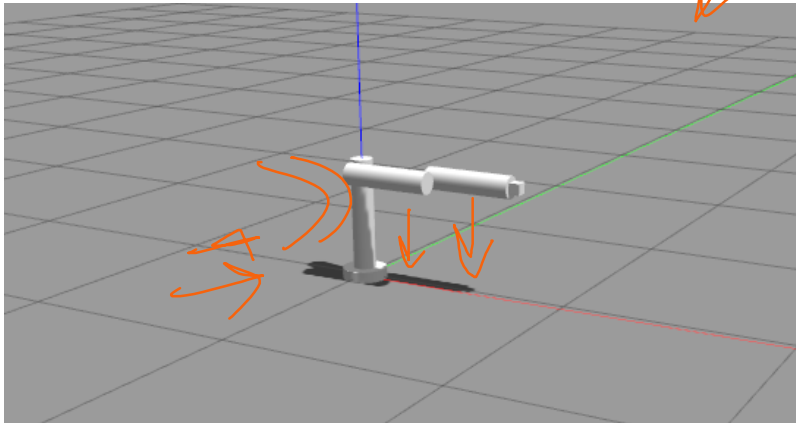
URDF

Xm R.





2- Gazebo/Vrep (which test physical properties)



5- ~~Motion~~ and Trajectory Planning

Sim study

