

These questions relate to lecture material and aim to highlight the most important concepts. We will cover questions similar to these for our final.

1. How does CCD differ from our two link analytical method?
2. Suppose we have a global rotation for the head joint. How do we find the local rotation that corresponds to it?
3. For the original analytical IK algorithm we found euler angles which corresponded to a desired pitch and roll. Explain how we could use the CCD angle/axis formulation instead.
4. Suppose we have a particle moving with velocity $v = (1,2)$ towards a ceiling with normal $(0,-1)$. Based on the equation from class, what is the collision response velocity for the particle?
5. Suppose we have two particles connected by a spring with rest length = 1. Particle 1 is at location $(-1,-2)$ and particle 2 is at location $(1,2)$. Compute the spring forces for each particle.