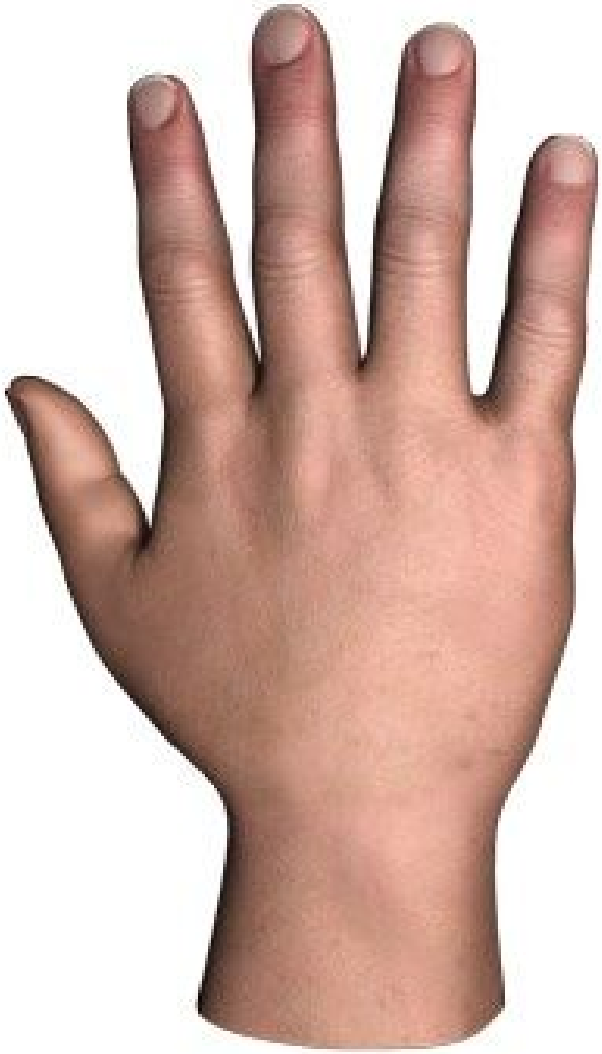
Classical mechanics 2012

First test: take home

18-19 August, 2012



Given above is the picture of an average human hand. You know from experience that the hand is not a rigid body. In answering this question neglect the fact that you can deform your hand by poking or pinching it, and concentrate on the effective theory that involves the grasping motions of the hand.

(a) How many degrees of freedom are required to describe the motions of this hand if the portion of the forearm below the wrist is fixed in position and orientation?
Write your answer here:

(b) **Mark the picture** to point to every element which increases the number of degrees of freedom and write how many degrees of freedom it adds.