

The joint angle  $q_1$  controls the orientation of the complete robotic arm, with respect to the reference frame. Changing it rotates both links together about the base at the origin, effectively sweeping the entire arm around the plane without altering its shape. Thus it primarily determines the direction in which the arm is pointing.

The joint angle  $q_2$  controls the angle between the links. Varying it changes how bent or extended the arm is.