

Robotics I

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Consider the planar RPPR robot in Fig. 1.

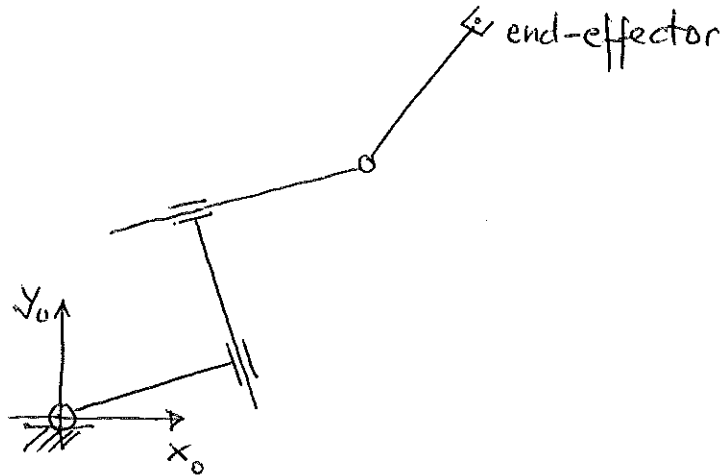


Figure 1: Planar RPPR robot

- Assign the frames according to the Denavit-Hartenberg convention and provide the associated table of parameters.
- Suppose that the two prismatic joints have a limited range: $|q_i| < D$, $i = 2, 3$. Determine the maximum possible distance of the end-effector from the origin of the base frame (*maximum reach*), and the robot configuration(s) q at which this value is attained.

[120 minutes; open books]