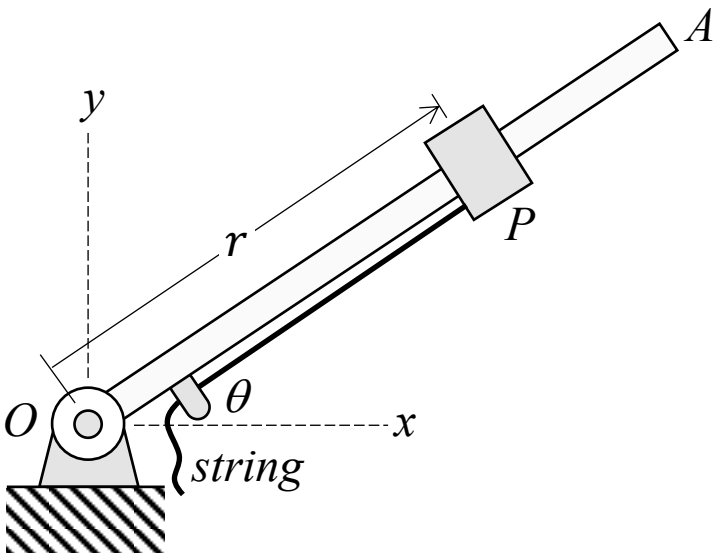
Homework H.1.F

Given: A string is used to pull in particle P in such a way that the radial position of P is given by $r = b - 0.05ct^2$, while the angular orientation of arm OA is given by $\theta = 0.25 + 0.1ht$, where r, θ and t are given in meters, radians and seconds, respectively. For this problem, $b = 1m$, $c = 1m/s^2$ and $h = 1/s$.

Find: Determine the velocity and acceleration of P.



Use the following parameters in your analysis: $t = 4$ s.

