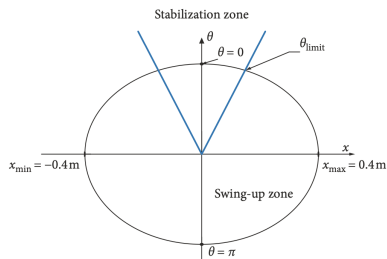
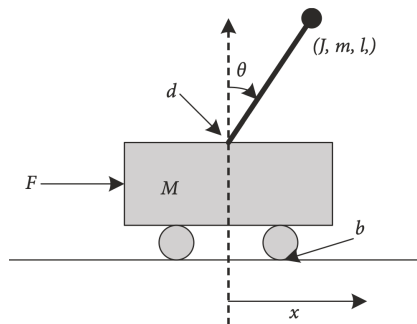


Switched Control of Inverted Pendulum



$$(m + M)\ddot{x} + b\dot{x} + ml\ddot{\theta} \cos(\theta) - ml\dot{\theta}^2 \sin(\theta) = F,$$
$$ml\ddot{x} \cos(\theta) + (J + ml^2)\ddot{\theta} - mgl \sin(\theta) + d\dot{\theta} = 0.$$