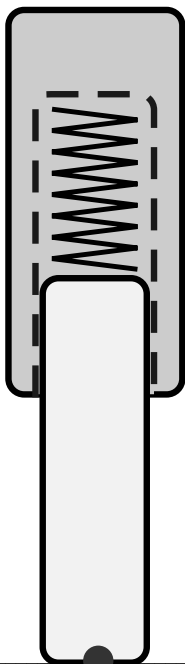
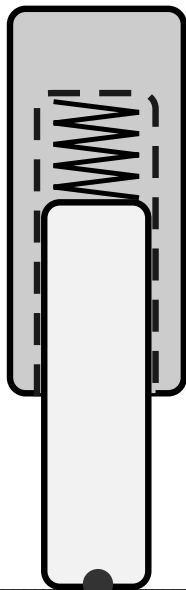


Flight  
 $g(q(t)) > 0$



Collision  
 $g(q(t)) = 0$   
 $\dot{g}(q(t)) < 0$



Contact  
 $g(q(t)) = 0$   
 $\lambda \geq 0$