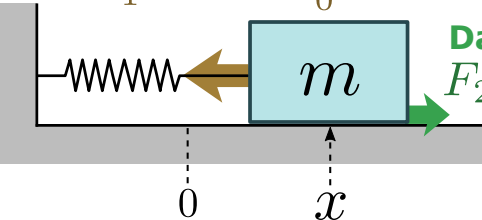**Spring force**
$$F_1 = -m\omega_0^2\, x$$

Damping force
$$F_2 = -2m\gamma\dot{x}$$

m

0

x