

# Netlumený oscilátor – pohybová rovnice

$$m \ddot{x} = -k x$$

$$m \ddot{x} + kx = 0$$

$$\ddot{x} + \frac{k}{m} x = 0$$

$$\frac{k}{m} = \omega_0^2$$

$$\lambda^2 + \omega_0^2 = 0$$

$$\lambda_{1,2} = \pm j \omega_0$$

$$x(t) = C_1 e^{\lambda_1 t} + C_2 e^{\lambda_2 t} = C_1 e^{j\omega_0 t} + C_2 e^{-j\omega_0 t}$$