Problem Formulation

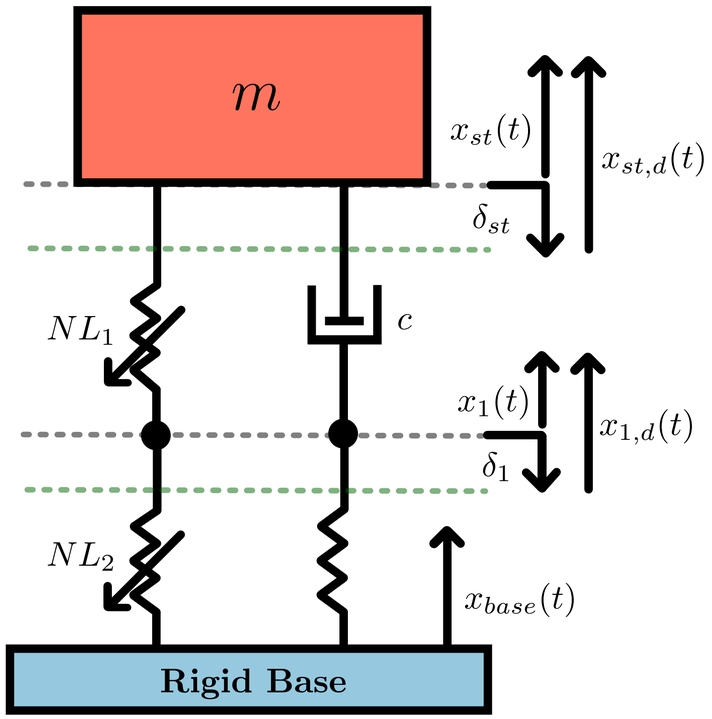

Figure -
Diagram of a 2-spring stack-damper system with a mass (m) suspended on top of it

m - Mass of the suspended block
NL_1 - Top conical disk spring (Non-linear)
NL_2 - Bottom conical disk spring (Non-linear)
c - Damping coefficient of the Damper

For the mass,
δ_{st} is the displacement in **static equilibrium**
$x_{st,d}(t)$ is the **dynamic displacement**
$x_{st}(t) = \delta_{st} + x_{st,d}(t)$ is the **total displacement**

For the bottom of NL_1,
δ_1 is the displacement in **static equilibrium**
$x_{1,d}(t)$ is the **dynamic displacement**
$x_1(t) = \delta_1 + x_{1,d}(t)$ is the **total displacement**