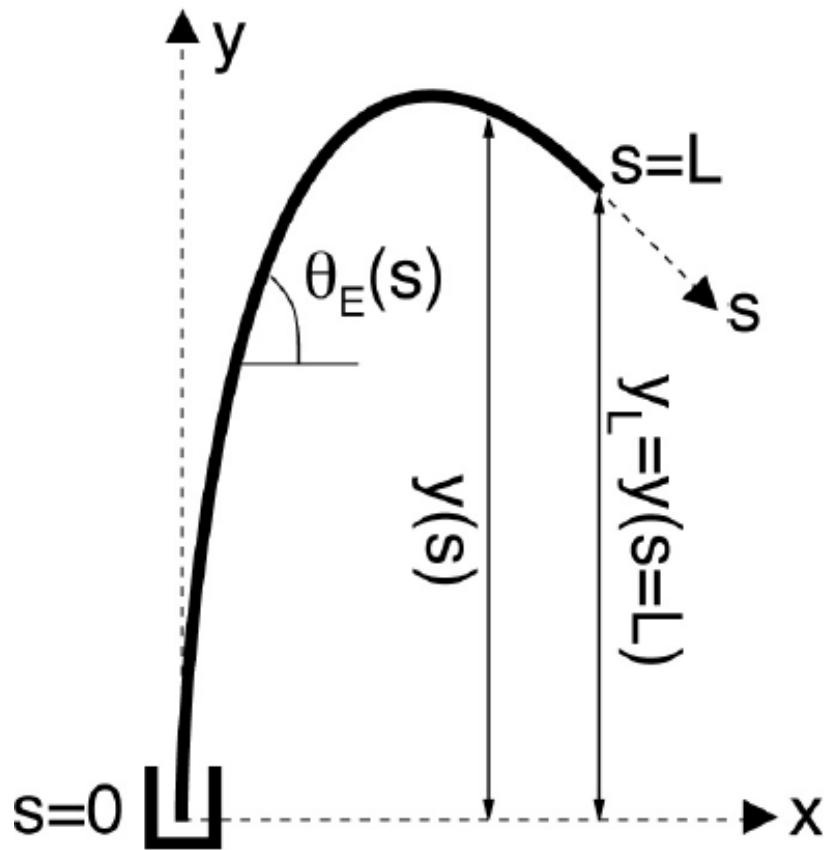


Studio 3: Elasto-gravity Bending



Boundary value problem:

$$B \theta''(s) - \rho_l g (L - s) \cos \theta(s) = 0$$

$$\text{BCs: } \theta(s=0) = 0 \quad \theta'(s=L) = 0$$

Shooting method

Initial value problem:

$$B \theta''(s) - \rho_l g (L - s) \cos \theta(s) = 0$$

$$\text{ICs: } \theta(s=0) = 0 \quad \theta'(s=0) = a$$

Vary the shooting parameter, a , until:

$$\theta'(s=L; a) = 0$$