

ME 260: Structural Optimization: Size, Shape, and Topology

Assigned: Sep. 22, 2026

In-class quiz 12 (10 mins)

Due: Sep. 22, 2026

Name:

Consider $\underset{x(t), y(t)}{\text{Extremize}} \int_{t_1}^{t_2} \left(m\dot{x}\dot{y} - \frac{1}{2}b\dot{x}y + \frac{1}{2}bx\dot{y} - kxy \right) dt$.

Write Euler-Lagrange equations for this. No need to write the boundary conditions.