A Fourth Order Equation Modeling Beams on Elastic Bearings

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In this talk we consider the global existence for the fourth order equation

$$u_{tt} + u_{xxxx} - M(\int_0^L |u_x(x,t)|^2 dx)u_{xx} = 0,$$

with nonlinear boundary conditions modeling beams on elastic foundations. The boundary stabilization for a related transmission problem involving a system of two Euler-Bernoulli equations is also considered.

References

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