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Scott Hansen* (shansen@iastate.edu). *Boundary controllability of Schrodinger and Euler Bernoulli equations with an internal point mass.*

We analyze the space of exact controllability of a Schrodinger equation with a singular internal dynamic boundary condition which can be thought of as an internal point mass. Surprisingly, the controllability space (with control active at one end point) can be identical on both sides of the point mass, or differ by one Sobolev order, or contain subspaces with both types of behavior. These results lead to some new characterizations of controllability spaces for the Euler-Bernoulli beam with an internal point mass with a single control active at an endpoint. (Received August 14, 2020)