

Robust control of an inclined cable

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LR7, IEB

Abstract:

This talk aims to present some recent works in collaboration with Simon Neild, David Wagg (Univ. of Bristol) and Aude Rondepierre (Univ. of Toulouse) regarding the robust control of a model of a cable.

Considering the partial differential equation model of the vibrations of an inclined cable with sag, we are interested in applying robust control technics to stabilize the system with measurement feedback when it is submitted to external disturbances. This talk focuses indeed on the construction of a standard linear infinite dimensional state space system and an H_∞ feedback control of vibrations with partial observation of the state. We'll present the theoretical background as well as some numerical experiments.