

STABILITY AND THE ESSENTIAL SPECTRAL RADIUS.

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ABSTRACT. In this lecture we make a comparison between the methods of the observability of hyperbolic systems and the method of the essential spectral radius of the corresponding semigroup, to show the exponential stability. We introduce a characterization of the exponential stability in terms of the essential spectral radius in Banach spaces.

We show examples that how infinite dimensional dynamical system can be simplified using arguments based on the essential spectral radius. We apply this to Timoshenko systems and others hyperbolic models.