

Switching controls for analytic semigroups

Diego A. Souza¹

¹ Universidad de Sevilla

Switching control problem consists in: assuming that one can control a system using two or more actuators, is there a control strategy such that at all times, only one actuator is active? In this talk, we present a positive answer to this question when the controlled system corresponds to an analytic semigroup spanned by a positive self-adjoint operator which is null-controllable in arbitrary small times. We will also analyze the finite dimensional setting and the case when the operator spans an analytic semigroup but is not necessarily self-adjoint. Our analysis relies on analyticity arguments.

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