
Abstract. The control decisions in our model are functions defined on a measurable space. They affect the evolution of the linear system in an indirect and nonlocal manner. A delayed control is one example. We introduce the notion of an underlying measure of such a system. Mere existence of an underlying measure yields information concerning the set of attainability, bang-bang and optimal solutions. We study the underlying measures, provide tools to compute them and relate their properties to the structure of the control system.

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