

EXACT NULL CONTROLLABILITY OF ABSTRACT DIFFERENTIAL EQUATIONS BY FINITE-DIMENSIONAL CONTROL AND STRONGLY MINIMAL FAMILIES OF EXPONENTIALS

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Abstract. The exact controllability to the origin for linear evolution control equation is considered. The problem is investigated by its transformation to infinite linear moment problem of generalized exponentials. The existence of solutions of obtained moment problem is investigated for the case when exponentials of a moment problem do not constitute a Riesz basis. The exact controllability of linear control system of neutral type is considered as an example.

Mathematics subject classification (2010): 34K06, 34K35, 93B05, 93B60, 93C23, 93C25.

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