

On the uniform exponential stability of linear skew-product semiflows*

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Abstract. The problem of uniform exponential stability of linear skew-product semiflows on locally compact metric space with Banach fibers, is discussed. It is established a connection between the uniform exponential stability of linear skew-product semiflows and some admissibility-type condition. This approach is based on the method of “test functions”, using a very large class of function spaces, the so-called Orlicz spaces.

1. Introduction

It is known that many equations from physics can be cast as an abstract Cauchy problem

$$(A) \quad x'(t) = A(t)x(t), x(s) = x_s \in D(A(s)), \quad t \geq s, \quad t, s \in J,$$

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