

(L^p, L^q) -COMPLETE ADMISSIBILITY AND EXPONENTIAL
EXPANSIVENESS OF LINEAR SKEW-PRODUCT FLOWS

ADINA LUMINIȚA SASU

Abstract. The goal of this paper is to give necessary and sufficient conditions for uniform exponential expansiveness of time-varying systems modelled by linear skew-product flows in infinite-dimensional spaces. If $p, q \in [1, \infty)$ we prove that the complete admissibility of the pair $(L^p(\mathbb{R}_+, X), L^q(\mathbb{R}_+, X))$ is a sufficient condition for uniform exponential expansiveness and it becomes necessary if and only if $p \leq q$.

MSC 2000. 34D05.

Key words. Exponential expansiveness, linear skew-product flow, complete admissibility.

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*Department of Mathematics
Faculty of Mathematics and Computer Science
West University of Timișoara
Bul. V. Pârvan 4
300223 Timișoara, Romania
E-mail: sasu@math.uvt.ro, lbsasu@yahoo.com*