

Robustness of Sacker-Sell Trichotomy for Nonautonomous Dynamics

Davor Dragičević

Faculty of Mathematics, University of Rijeka, Rijeka, Croatia
DDRAGICEVIC@MATH.UNIRI.HR

Abstract

We discuss the robustness property of the notion of a uniform exponential dichotomy (introduced by Sacker and Sell [2]) for nonautonomous dynamics. More precisely, we formulate conditions under which this notion persists under sufficiently small linear perturbations. It turns out that we need to restrict to small perturbations in ℓ^1 -norm. The talk will be based on the joint work with A. L. Sasu and B. Sasu [1].

References

- [1] D. Dragičević, A. L. Sasu and B. Sasu, *Robustness of uniform exponential trichotomy: An input-output approach*, J. Differential Equations **439** (2025), 113409, 36pp.
- [2] R. J. Sacker and G. R. Sell, *Existence of dichotomies and invariant splittings for linear differential systems III*, J. Differential Equations **22** (1976), 497–522.