TRANSITIVITY OF SKEW EXTENSIONS OVER HYPERBOLIC SYSTEMS

ANDREW TÖRÖK

It is expected that systems with some degree of hyperbolicity are typically “chaotic”, as we are going to explain. In this talk we discuss skew extensions of a hyperbolic base with fiber a Lie group.

When the fiber is compact, it is known that there is an open and dense set of ergodic (and therefore transitive) extensions; moreover, the same is true for mixing extensions. For non-compact fibers we describe results showing that, provided an obvious obstruction is avoided, the extension is typically transitive. The difficulties arise from the lack of recurrence in the fibers, and require more algebraic details about the group involved.

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