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Title: Ergodicity of infinite antisymmetric extensions of symmetric IETs

We study the ergodicity of skew products on $[0, 1) \times \mathbb{Z}$ (w.r.t. the product of Lebesgue and counting measures) where the base is an interval exchange transformation T on d intervals and the cocycle is given by the difference of the characteristic functions of the intervals $(0, 1/2)$ and $(1/2, 1)$, which we refer to as the $1/2$ cocycle.

Systems of this kind appear naturally as first-return maps of certain flows on infinite translation surfaces and have been extensively studied in the case $d = 2$ (i.e., when T is a rotation). By a classical result of Oren, for any irrational rotation T , the associated skew product (w.r.t. to the $1/2$ cocycle) is ergodic. However, very little is known in the case $d > 2$.

In this talk, we will show that for typical 'symmetric' interval exchange transformations, the associated skew product (w.r.t. to the $1/2$ cocycle) is ergodic.