Dynamics of smooth surface diffeomorphisms: entropy continuity of exponents

Tuesday, 7 December 2021 14:00 (1:15)

Content

The top Lyapunov exponent and the entropy are well-known to depend discontinuously on the invariant measures. We show that the two defects in lower semicontinuity are linked for C^∞ smooth surface diffeomorphisms. In particular, for a given sequence of ergodic measures, continuity of the entropy implies that of the exponent. The proof relies on Yomdin theory and a key reparametrization lemma for curves near homoclinic tangencies. This has a number of consequences.

This is joint work with Sylvain CROVISIER and Omri SARIG.

Summary

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