

Mixing rates for symplectic almost Anosov maps

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Content

Establishing sharp bounds on the mixing rates of non-uniformly hyperbolic maps has been an active area of research for some time and Markov partitions in one way or another play an important role in this area. In this talk I will focus on a class of 2D, (non-uniformly) hyperbolic, symplectic (area preserving) maps that exhibit intermittent behaviour near a fixed point. The systems under considerations are examples of what are called “almost Anosov” maps, but in contrast to examples considered previously, in our examples, the derivative of the maps at the neutral fixed point is not the identity matrix and the stable and unstable distributions are tangent. This is the generic behaviour near a neutral fixed point for a 2D symplectic map and such a behaviour complicates considerably the geometrical analysis involved in estimating the mixing rate. I will briefly explain the class of examples and describe the ingredients that lead to proving sharp mixing rates for such systems. (Joint work with Carlangelo Liverani)

Summary

Presenter(s) : ESLAMI, Peyman (Un. Rome, Italy)

Session Classification : Workshop