



Full horseshoe for the Galerkin truncations of 2D Navier-Stokes equations with degenerate stochastic forcing

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- (1) it is proved that under both deterministic and random frameworks, positive entropy systems have weak horseshoes, partially hyperbolic systems with positive entropy have semi-horseshoes and subpolynomial average complexity systems satisfy Sarnak's Möbius disjointness Conjecture;
- (2) Prove the pointwise Multiple Ergodic Theorem for ergodic distal systems. The characteristic factor theory of minimal systems was established;
- (3) A new metric is constructed in the space of all probability measures on a finite graph, from which the Fokker-Planck equation is established. Related work has been published in journals such as CPAM, JEMS, MAMS, Adv. Math, CMP, and so on.

Abstract: In this talk, we will introduce the existence of full horseshoe for the Galerkin truncations of 2D Navier-Stokes equations with degenerate stochastic forcing (Hypoelliptic condition). We will also review weak horseshoe and semi-horseshoe. This is based on joint work with Jianhua Zhang.

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主办单位:

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