



Seminar/Talk

Non-density of hyperbolicity in complex dynamics in several variables

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One of the main goals in the theory of dynamical systems is to describe the dynamics of a “typical” map. For instance, in the case of diffeomorphisms of a given manifold, it was conjectured by Smale in the 60s that uniform hyperbolicity was generically satisfied. This hope was however fast discouraged by exhibiting dynamical systems displaying in a robust way dynamical configurations which are obstructions to hyperbolicity: robust homoclinic tangencies (this is the so-called Newhouse phenomenon) and robust heterodimensional cycles. In this talk, I will explain these phenomena and their extensions to the complex setting. In particular, I will show how to construct robust heterodimensional cycles in the family of polynomial automorphisms of $\mathbb{C}^3$. The main tool is the notion of blender coming from real dynamics.

Tuesday, February 25, 2025 02:00pm - 03:30pm

Office Bldg West / Ground floor / Heinzel Seminar Room (I21.EG.101)



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