

Cr-density of hyperbolicity (non-uniform) among partially hyperbolic diffeomorphisms

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Abstract:

Karina Marin, a graduate student at IMPA, has recently studied symplectic partially hyperbolic diffeomorphisms with 2-dimensional center subbundle. Assuming the diffeomorphism has a periodic point and satisfies certain pinching and bunching conditions, she proved that the diffeomorphism is C^r -approximated by symplectic diffeomorphisms whose Lyapunov exponents are all different from zero. The proof combines the Invariance Principle with a careful analysis of the way the accessibility property unfolds under perturbations of the diffeomorphism.