

Mixing in Hamiltonian disk maps

Abstract:

In the mid 90's a surprising discovery was made: that pseudo-holomorphic curve techniques from symplectic geometry can provide an intrinsic way to construct "global surfaces of section" in 3-dimensional energy surfaces for a large class of Hamiltonian systems. This is the starting point for a new approach for studying Hamiltonian surface diffeomorphisms. In this talk I will focus on an example application which makes progress on a long standing problem in smooth ergodic theory. I will begin by discussing the history and motivation for the question.

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