

INDAM MEETING:
**HYPERBOLIC DYNAMICAL SYSTEMS
IN THE SCIENCES**

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High order critical sets for some anti-integrable limits of the standard map

In this talk we present results about a family of maps which can be viewed as anti-integrable limits of the standard map. We will show how to obtain some form of equidistribution for a given class of observables by means of standard pairs and critical sets. In principle such equidistribution bounds should improve by grouping together several iterations of the map and defining the so-called high order critical sets. The talk will focus on presenting some recent results which have been obtained using the an order two critical set; we will also show some of the difficulties that arise when attempting to define higher-order critical sets and how these challenges are related to the presence of elliptic islands.