

Constructive methods in stability and instability

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Abstract: It has been known since the times of Poincare' that the stability or instability (specially in Hamiltonian systems) is organized by invariant structures that act as landmarks organizing the long term behavior.

There is great interest in having theories that establish the existence of these structures and provide constructive methods to compute them in concrete systems.

We plan to present an introduction to the theorems and computational methods of several of these structures: KAM tori, Normally hyperbolic manifolds as well as some intermediate objects such as whiskered tori.