

Abstract

The results of this thesis pertain to the problem of stability of invariant sets for maps. In particular, they relate to an important part of the theory of dynamical systems – the stability of normally hyperbolic invariant manifolds under perturbation. The classical theorems in this field require that the dynamics of the perturbed system satisfy certain asymptotic conditions with respect to the invariant manifold (whose existence is assumed *a priori*). Namely, it is necessary that *rate conditions* are satisfied. Perturbations allowed by our results can break these rate conditions and the assumptions of the theorems of this thesis are formulated in topological terms. The result constitute a generalization of the theory of stability of normally hyperbolic invariant manifolds.

Key words

Dynamical systems, stability, normally hyperbolic invariant manifolds, intersection number, covering relations