

Lanford, Oscar E. III

Introduction to the mathematical theory of dynamical systems. (English) Zbl 0565.58027
Chaotic behaviour of deterministic systems, Les Houches/Fr. 1981, Sess. 36, 3-52 (1983).

[For the entire collection see [Zbl 0546.00032](#).]

The author says "These notes are intended as a brief survey of a few topics in the theory of differentiable dynamical systems..." and in a certain sense this is a very accurate description; however, the brevity is rather selective. The text includes a substantial sketch of the proof of the local stable manifold theorem and very enlightening detailed descriptions of the Smale horseshoe and the solenoid. Other topics covered included hyperbolic sets and axiom A, the shadow lemma and the Ruelle-Bowen ergodic theorem for axiom A attractors.

Reviewer: D.Newton

MSC:

[37D99](#) Dynamical systems with hyperbolic behavior

Cited in 1 Document

Keywords:

[local stable manifold](#); [Smale horseshoe](#); [axiom A](#); [shadow lemma](#); [Ruelle- Bowen ergodic theorem](#)