22(5)

Shadowing and Inverse Shadowing for C^1 Endomorphisms

朱玉峻，Jin Lian Zhang，何连法

河北师范大学数学与信息科学学院 (College of Mathematics and Information Sicence, Hebei Teacher's,\Shijiangzhuang 050016, P. R. China) 河北师范大学数学系

摘要   In this paper, we consider the shadowing and the inverse shadowing properties for C^{1} endomorphisms. We show that near a hyperbolic set a C^{1} endomorphism has the shadowing property, and a hyperbolic endomorphism has the inverse shadowing property with respect to a class of continuous methods. Moreover, each of these shadowing properties is also ``uniform'' with respect to C^{1} perturbation.

关键词   shadowing property   inverse shadowing   endomorphism   Hyperbolic set

分类号   37C50

Shadowing and Inverse Shadowing for C^1 Endomorphisms

Yu Jun ZHU, Jin Lian ZHANG, Lian Fa HE

College of Mathematics and Information Science, Hebei Normal University, Shijiazhuang 050016, P. R. China

Abstract In this paper, we consider the shadowing and the inverse shadowing properties for C^{1} endomorphisms. We show that near a hyperbolic set a C^{1} endomorphism has the shadowing property, and a hyperbolic endomorphism has the inverse shadowing property with respect to a class of continuous methods. Moreover, each of these shadowing properties is also ``uniform'' with respect to C^{1} perturbation.

Key words   shadowing property   inverse shadowing property   endomorphism   Hyperbolic set

通讯作者 朱玉峻 yjzhu@heinfo.net,yjzhu2@sina.com