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## Shadowing and Inverse Shadowing for $SC^1$ Endomorphisms

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**摘要** In this paper, we consider the shadowing and the inverse shadowing properties for  $SC^1$  endomorphisms. We show that near a hyperbolic set a  $SC^1$  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  $SC^1$  perturbation.

**关键词** [shadowing property](#) [inverse shadowing](#) [endomorphism](#) [Hyperbolic set](#)

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**Abstract** In this paper, we consider the shadowing and the inverse shadowing properties for  $SC^1$  endomorphisms. We show that near a hyperbolic set a  $SC^1$  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  $SC^1$  perturbation.

**Key words** [shadowing property](#) [inverse shadowing property](#) [endomorphism](#) [Hyperbolic set](#)

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