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The asymptotic average shadowing property and transitivity. (English) Zbl 1121.37011
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Summary: We introduce the notion of the asymptotic average shadowing property (AASP) and investigate the relation between the AASP and transitivity. It is shown that a continuous map on X with the AASP is chain transitive and an \mathcal{L} -hyperbolic homeomorphism on X with the AASP is topologically transitive, where X is a compact metric space.

MSC:

- 37B05 Dynamical systems involving transformations and group actions with special properties (minimality, distality, proximality, expansivity, etc.)
- 37C70 Attractors and repellers of smooth dynamical systems and their topological structure
- 39A10 Additive difference equations
- 37C50 Approximate trajectories (pseudotrajectories, shadowing, etc.) in smooth dynamics

Cited in **3** Reviews
Cited in **31** Documents

Keywords:

chain transitivity; topologically transitive systems; chaotic phenomenon

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