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The equivalent condition of $G$-asymptotic tracking property and $G$-Lipschitz tracking property. (English) [Zbl 1497.37023]


Summary: In this paper, we introduce the concepts of $G$-Lipschitz tracking property and $G$-asymptotic tracking property in metric $G$-space and obtain the equivalent conditions of $G$-asymptotic tracking property if and only if the shift map $\sigma$ has the $G$-Lipschitz tracking property in the inverse limit space under the topological group action. These results generalize the corresponding results in [L. Chen and S. Li, Proc. Am. Math. Soc. 115, No. 2, 573–580 (1992; Zbl 0762.58017)].

MSC:

37B65 Approximate trajectories, pseudotrajectories, shadowing and related notions for topological dynamical systems
37B02 Dynamics in general topological spaces
37B05 Dynamical systems involving transformations and group actions with special properties (minimality, distality, proximality, expansivity, etc.)

Keywords:

metric $G$-space; topological group; inverse limit space; $G$-Lipschitz tracking property; $G$-asymptotic tracking property

Full Text: DOI

References:


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