

Item: 1 of 1 | [Return to headlines](#)[MSN-Support](#) | [Help Index](#)Select alternative format: [BibTeX](#) | [ASCII](#)**MR1338481 (97f:58098)****[Hurder, Steven \(1-ILCC\)](#)****Infinitesimal rigidity for hyperbolic actions.***J. Differential Geom.* **41** (1995), no. 3, 515–527.[58F15 \(22E40 57S30\)](#)[Journal](#)[Article](#)[Doc Delivery](#)**References: 0****[Reference Citations: 2](#)****[Review Citations: 1](#)**

This paper is well written and may be interesting even for nonexperts. Let Γ be a finitely generated group, M a compact manifold and $\varphi: \Gamma \times M \rightarrow M$ a C^1 action of Γ on M . A point $x \in M$ is periodic for φ if the orbit Γx is finite. The purpose of this paper is to give a short proof of the infinitesimal rigidity of a hyperbolic group action, whenever the periodic points are dense and the group satisfies a vanishing cohomology condition. Applying this result to a C^∞ action φ , the author obtains the C^∞ infinitesimal rigidity for an affine action of a higher rank lattice on the torus T^n . This generalizes previous results of J. Lewis [Trans. Amer. Math. Soc. **324** (1991), no. 1, 421–445; [MR 91f:22019](#)] and M. Pollicott [“Infinitesimal rigidity of group actions with hyperbolic generators”, Preprint, 1993; per bibl.].

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