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Exceptional minimal sets of $C^{1+\alpha}$-group actions on the circle.
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For a $C^{1+\alpha}$-action $(0 < \alpha < 1)$ of a finitely generated group Γ on S^1 the existence of hyperbolic fixed points in any exceptional minimal set K is proved provided that either the growth of an orbit through an endpoint x_0 of a gap I of K is exceptional or the entropy of the action on K is positive. In the proof, some ergodic invariant measures and Lyapunov exponents for the geodesic flow of the suspension of the action are applied. The paper realizes in part the programme proposed earlier by the author [89k:58155in Dynamical systems (College Park, MD, 1986–87), 291–328, Lecture Notes in Math., 1342, Springer, Berlin, 1988; MR 89k:58155].

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