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H₁-semistability for projective groups. (English) Zbl 1378.14020
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Summary: We initiate the study of the asymptotic topology of groups that can be realised as fundamental groups of smooth complex projective varieties with holomorphically convex universal covers (these are called here as holomorphically convex groups). We prove the H₁-semistability conjecture of Geoghegan for holomorphically convex groups. In view of a theorem of Eyssidieux et al. [Ann. Math. (2) 176, No. 3, 1545–1581 (2012; Zbl 1273.32015)], this implies that linear projective groups satisfy the H₁-semistability conjecture.

MSC:

14F35 Homotopy theory and fundamental groups in algebraic geometry
32E05 Holomorphically convex complex spaces, reduction theory
32Q30 Uniformization of complex manifolds
55T10 Serre spectral sequences

Full Text: DOI arXiv

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