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Convergence groups and Seifert fibered 3-manifolds. (English) Zbl 0840.57005
Invent. Math. 118, No. 3, 441-456 (1994).

The authors give a new proof of D. Gabai's result, that if S^1 has a fixed orientation and T denotes the set of ordered triples (x, y, z) of distinct points occurring in positive order on S^1 , acted on by $\text{Homeo}_+(S^1)$ in the obvious way, and if $\Gamma \subset \text{Homeo}_+(S^1)$ is a discrete convergence group, then T/Γ is Seifert fibered. (By work of G. Mess and P. Scott, this implies the Seifert Fibre Space Conjecture.) The proof is by means of braid theory.

Reviewer: C.Kearton (Durham)

MSC:

57M25 Knots and links in the 3-sphere (MSC2010)
57M60 Group actions on manifolds and cell complexes in low dimensions

Cited in **3** Reviews
Cited in **84** Documents

Keywords:

Seifert fibered; braid; convergence group

Full Text: [DOI](#) [EuDML](#)

References:

- B R.H. Bing: An alternative proof that 3-manifolds can be triangulated. *Ann. Math.*69, 37-65 (1959) · [Zbl 0106.16604](#) · [doi:10.2307/1970092](#)
- E D.B.A. Epstein: Periodic flows on 3-manifolds. *Ann. Math.*95, 66-82 (1972) · [Zbl 0231.58009](#) · [doi:10.2307/1970854](#)
- G D. Gabai: Convergence groups are Fuchsian groups. *Ann. Math.*136, 447-510 (1992) · [Zbl 0785.57004](#) · [doi:10.2307/2946597](#)
- GH C. Gordon, W. Heil: Cyclic normal subgroups of fundamental groups of 3-manifolds. *Topology*14, 305-309 (1975) · [Zbl 0331.57001](#) · [doi:10.1016/0040-9383\(75\)90014-2](#)
- GM F.W. Gehring, G. Martin. Discrete quasiconformal groups I, *Proc. London Math. Soc.*55, 331-358 (1987) · [Zbl 0628.30027](#)
- M G. Mess: Centers of 3-manifold groups and groups which are coarse quasiisometric to planes (preprint)
- S P. Scott: There are no fake Seifert fibre spaces with infinite π_1 . *Ann. Math.*117, 35-70 (1983) · [Zbl 0516.57006](#) · [doi:10.2307/2006970](#)
- T P. Tukia: Homeomorphic conjugates of Fuchsian groups. *J. Reine Angew. Math.*391, 1-54 (1988) · [Zbl 0644.30027](#) · [doi:10.1515/crll.1988.391.1](#)
- W F. Waldhausen: On irreducible 3-manifolds which are sufficiently large. *Ann. Math.*87, 56-88 (1968) · [Zbl 0157.30603](#) · [doi:10.2307/1970594](#)

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