

Carette, Mathieu; Francaviglia, Stefano; Kapovich, Ilya; Martino, Armando

Corrigendum: “Spectral rigidity of automorphic orbits in free groups”. (English)

Zbl 1307.20037

Algebr. Geom. Topol. 14, No. 5, 3081-3088 (2014).

Summary: Lemma 5.1 in our paper mentioned in the title [Algebr. Geom. Topol. 12, No. 3, 1457-1486 (2012; Zbl 1261.20040)] says that every infinite normal subgroup of $\text{Out}(F_N)$ contains a fully irreducible element; this lemma was substantively used in the proof of the main result, Theorem A [in loc. cit.]. Our proof of Lemma 5.1 [in loc. cit.] relied on a subgroup classification result of *M. Handel* and *L. Mosher* [“Subgroup classification in $\text{Out}(F_n)$ ”, arXiv:0908.1255], originally stated in [Handel and Mosher, loc. cit.] for arbitrary subgroups $H \leq \text{Out}(F_N)$. It subsequently turned out [see *M. Handel* and *L. Mosher*, “Subgroup decomposition in $\text{Out}(F_n)$: introduction and research announcement”, arXiv:1302.2681, page 1] that the proof of the Handel-Mosher theorem needs the assumption that H is finitely generated. Here we provide an alternative proof of Lemma 5.1 from [Carette et al., loc. cit.], which uses the corrected version of the Handel-Mosher theorem and relies on the 0-acylindricity of the action of $\text{Out}(F_N)$ on the free factor complex (due to Bestvina, Mann and Reynolds).

MSC:

20F65 Geometric group theory
20E05 Free nonabelian groups
20E36 Automorphisms of infinite groups
20F05 Generators, relations, and presentations of groups
20E08 Groups acting on trees
57M07 Topological methods in group theory
57M50 General geometric structures on low-dimensional manifolds
53C24 Rigidity results

Cited in 1 Document

Keywords:

marked length spectrum; spectral rigidity; free groups; outer space; translation length functions; spectrally rigid subsets; geodesic currents

Full Text: DOI arXiv

References:

- [1] M Bestvina, M Feighn, Outer limits, preprint (1993)
- [2] M Bestvina, M Feighn, A hyperbolic $\text{Out}(F_n)$ -complex, Groups Geom. Dyn. 4 (2010) 31 · Zbl 1190.20017 · doi:10.4171/GGD/74
- [3] M Bestvina, M Feighn, Hyperbolicity of the complex of free factors, Adv. Math. 256 (2014) 104 · Zbl 1348.20028 · doi:10.1016/j.aim.2014.02.001
- [4] M Bestvina, P Reynolds, The boundary of the complex of free factors, · Zbl 1337.20040
- [5] M Carette, S Francaviglia, I Kapovich, A Martino, Spectral rigidity of automorphic orbits in free groups, Algebr. Geom. Topol. 12 (2012) 1457 · Zbl 1261.20040 · doi:10.2140/agt.2012.12.1457
- [6] T Coulbois, A Hilion, M Lustig, \mathbb{R} -trees and laminations for free groups, II: The dual lamination of an \mathbb{R} -tree, J. Lond. Math. Soc. 78 (2008) 737 · Zbl 1198.20023 · doi:10.1112/jlms/jdn053
- [7] F Dahmani, V Guirardel, D Osin, Hyperbolically embedded subgroups and rotating families in groups acting on hyperbolic spaces, · Zbl 1396.20041
- [8] M Handel, L Mosher, Subgroup classification in $\text{Out}(F_n)$,
- [9] M Handel, L Mosher, Subgroup decomposition in $\text{Out}(F_n)$: Introduction and research announcement, · Zbl 1285.20033
- [10] A Hilion, C Horbez, The hyperbolicity of the sphere complex via surgery paths, · Zbl 1379.57004
- [11] I Kapovich, Currents on free groups (editors R Grigorchuk, M Mihalik, M Sapir, Z \v{S}unik), Contemp. Math. 394, Amer. Math. Soc. (2006) 149 · Zbl 1110.20034 · doi:10.1090/conm/394/07441
- [12] I Kapovich, M Lustig, Geometric intersection number and analogues of the curve complex for free groups, Geom. Topol. 13 (2009) 1805 · Zbl 1194.20046 · doi:10.2140/gt.2009.13.1805
- [13] I Kapovich, M Lustig, Intersection form, laminations and currents on free groups, Geom. Funct. Anal. 19 (2010) 1426 · Zbl

[1242.20052](#) · [doi:10.1007/s00039-009-0041-3](#)

- [14] I Kapovich, A Myasnikov, Stallings foldings and subgroups of free groups, *J. Algebra* 248 (2002) 608 · [Zbl 1001.20015](#) · [doi:10.1006/jabr.2001.9033](#)
- [15] I Kapovich, K Rafi, On hyperbolicity of free splitting and free factor complexes, · [Zbl 1315.20022](#) · [doi:10.4171/GGD/231](#)
- [16] D Osin, Acylindrically hyperbolic groups, · [Zbl 1346.20059](#)
- [17] P Reynolds, Reducing systems for very small trees,
- [18] S C Wang, B Zimmermann, The maximum order of finite groups of outer automorphisms of free groups, *Math. Z.* 216 (1994) 83 · [Zbl 0795.20013](#) · [doi:10.1007/BF02572310](#)

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.