

GROUPS SIMILAR TO THE THOMPSON GROUPS

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With Roman Sauer, I showed that a certain class of groups of type F_∞ is ℓ^2 -invisible, i.e. ℓ^2 -homology vanishes in all degrees. This answers a question posed by Lück generalizing the zero-in-the-spectrum conjecture by Gromov. This class, being a subclass of so called local similarity groups first introduced by Bruce Hughes, contains the well known Thompson group V . Besides that, the whole class of local similarity groups is in some sense "Thompson-like". There are many more classes of groups that resemble the classical Thompson groups, e.g. diagram groups, higher dimensional and braided versions, groups of piecewise linear homeomorphisms etc. They all come with (similar) proofs of being of type F_∞ . Currently, I'm trying to work out an idea how to unify all these "Thompson-like" groups into a single conceptual framework and show that they are of type F_∞ .

REFERENCES

- [1] Roman Sauer and Werner Thumann, *L^2 -invisibility and a class of local similarity groups*, [arXiv:1304.6843 \[math.AT\]](#) (2013).

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