

On panel-regular \tilde{C}_2 -lattices

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(Joint work with Stefan Witzel)

Abstract

In [1] Essert introduces a class of \tilde{C}_2 -buildings that admit a lattice acting regularly on two types of panels. He constructs these buildings as universal covers of complexes of groups. After explaining the construction I will focus on the question for which data the construction yields equivariant actions (with respect to an isomorphism between the lattices): The number of these actions (up to equivariance) grows super-exponentially with the thickness parameters of the buildings. For small thickness parameters the numbers can be given explicitly.

Lastly, I would like to mention that almost all of the constructed buildings are exotic, since slanted symplectic quadrangles are used in the construction.

Keywords: Euclidean buildings, complexes of groups, lattices

References

- [1] Essert, J., "A geometric construction of panel-regular lattices for buildings of types \tilde{A}_2 and \tilde{C}_2 ", *Algebr. Geom. Topol.* 13(3) (2013), 1531–1578