

Geometry Seminar

www.math.uni.wroc.pl/dgt/

Monday, 07/10/2024, 14:15 WS

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Around biautomaticity of $CAT(0)$ triangle-square groups

Abstract: We will discuss triangle-square $CAT(0)$ groups, that is, groups acting by isometries properly, cocompactly and cellularly on a $CAT(0)$ cellular complex built of equilateral triangles and squares. It is known that every triangular $CAT(0)$ group and every square $CAT(0)$ group is biautomatic thanks to the result of S. M. Gersten and H. B. Short. In this talk we will review the ideas regarding biautomaticity of such groups and the ideas given in a paper “Triangles, Squares and Geodesics” of R. Levitt and J. McCammond. Then we will show counterexamples for two hypotheses stated in the latter paper. Lastly we will discuss a possible way of fixing Levitt and McCammond idea of proving biautomaticity of discussed groups.

streaming via ZOOM:

Meeting ID: 967 6507 7409

Meeting password: “GS” (two letters) followed by the Euler characteristic of the closed orientable surface of genus 89.