

Seminarium geometrów

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Outer Automorphisms via Bass–Serre theory

Abstract: The automorphisms of a group do not vary particularly transparently with the group: for instance, changing a single integer in the presentation of a Baumslag–Solitar group can turn a finite outer automorphism group into one which is not even finitely generated. However, in nice enough situations, one can extract information about the outer automorphism group by thinking about actions on trees. The challenge becomes ensuring you are in such a situation, and interpreting the information you get.

I will discuss how to construct and analyse useful actions on trees in two related situations: finite generation of the outer automorphism of a free-by-cyclic group, and finiteness properties of certain centralisers in $\text{Out}(F_n)$. Both results are joint with Armando Martino. If time allows, I will also discuss ongoing work investigating centralisers in more outer automorphism groups (joint with Gilbert Levitt and Armando Martino).

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.