Seminarium geometrów

Poniedziałek, 15.01.2024, 14:15 HS

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Mapping class groups of flat orbifolds, Part II: Description up to commensurability

Abstract: Let $\mathcal{O} = \Gamma \backslash \mathbb{R}^n$ be a closed flat orbifold. Part I of the talk tells us that the mapping class group of $\mathcal{O}$ is isomorphic to $\mathrm{N}_{\mathrm{Aff}(n)}(\Gamma)/\mathrm{C}_{\mathrm{Aff}(n)}(\Gamma)\Gamma$ and therefore closely related to the group $\tau(\mathrm{N}_{\mathrm{Aff}(n)}(\Gamma))$, where $\tau \colon \mathrm{Aff}(n) \to \mathrm{GL}_n(\mathbb{R})$ is the canonical projection. This motivates further study of the group $\tau(\mathrm{N}_{\mathrm{Aff}(n)}(\Gamma))$.

This week, we will give a description of a group sharing a finite-index subgroup with $\tau(\mathrm{N}_{\mathrm{Aff}(n)}(\Gamma))$, based on the representation of the holonomy group $H_\Gamma = \tau(\Gamma)$ given by its action on $\Lambda_\Gamma = \tau^{-1}(\mathrm{Id}) \cap \Gamma$. We will outline the concepts appearing in the statements of the results and the proofs, coming from representation, Galois and algebraic number theories.

Joint work with Ana Karla García Pérez and Ingrid Membrillo Solis.

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.