Seminarium geometrów

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

Poniedziałek, 08.01.2024, 14:15 HS

Motiejus Valiunas (Uniwersytet Wrocławski)

Mapping class groups of flat orbifolds, Part I: The classifying space

Abstract: Mapping class groups of closed hyperbolic surfaces have been widely studied and form a core part of geometric group theory. However, mapping class groups of higher-dimensional manifolds are in general much less well-understood.

In this talk, we will discuss mapping class of closed flat manifolds—the quotients $\mathcal{M} = \Gamma\backslash\mathbb{R}^n$ for a torsion-free discrete cocompact subgroup $\Gamma \leq \mathrm{Aff}(n) = \mathbb{R}^n \rtimes \mathrm{GL}_n(\mathbb{R})$—and more generally closed flat orbifolds—the quotients $\mathcal{O} = \Gamma\backslash\mathbb{R}^n$ for a discrete cocompact subgroup $\Gamma \leq \mathrm{Aff}(n)$. We will discuss how a mapping class group $\mathrm{MCG}(\mathcal{O})$ can be defined (highlighting some high-dimensional phenomena that do not appear in dimension 2), and explain why the space of flat metrics on $\mathcal{O}$—a rough equivalent of the Teichmüller space for hyperbolic surfaces—is a model for the classifying space for proper actions of $\mathrm{MCG}(\mathcal{O})$.

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.