Student Colloquium
at Chebyshev Laboratory

Thursday, December 19, 17:15, room 105

Quasi-isometry and commensurability of groups

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Gromov suggested to study groups from geometric point of view, in particular via geometry of their Cayley graphs. The central notion here is quasi-isometry of metric spaces, which is a map respecting large-scale geometry of spaces, but ignoring the small-scale details. Two finitely generated groups are called quasi-isometric if their Cayley graphs are. Quasi-isometric groups can be considered similar from geometric point of view. Two groups are called commensurable if they have isomorphic subgroups of finite index. Commensurable groups can be considered similar from algebraic point of view. Being commensurable is one of the main algebraic reasons for groups to be quasi-isometric. Both commensurability and quasi-isometry are equivalence relations. After saying some general words about quasi-isometric rigidity of groups, I will discuss commensurability and quasi-isometry classification of groups in two important classes - right-angled Artin groups and (if time permits) Baumslag-Solitar groups.

Everyone is welcome!