APRIL 1 - JULY 15

IMPAN, WARSAW

SIMONS SEMESTER

GEOMETRIC AND ANALYTIC GROUP THEORY

SEMINAR WEDNESDAY,29.05.2019 14:00-14:50

ROOM 403 ŚNIADECKICH 8 00-656 WARSZAWA

Markus Steenbock (Ecole Normale Superieure)

Product set growth in groups and hyperbolic geometry

Abstract:

We discuss product theorems in groups acting on hyperbolic spaces: for every hyperbolic group there exists a constant a > 0such that for every finite subset U that is not contained in a virtually cyclic subgroup, $|U^3| > (a|U|)^2$. We also discuss the growth of $|U^n|$ and conclude that the entropy of U (the limit of $1/n \log |U^n|$ as n goes to infinity) exceeds $1/2 \log (a|U|)$. This generalizes results of Razborov and Safin, and answers a question of Button. We discuss similar estimates for groups acting acylindrically on trees or hyperbolic spaces. This talk is on a joint work with T. Delzant.









