Speaker: Mikolaj Fraczyk

Title: Benjamini Schramm convergence of arithmetic locally symmetric spaces.

Abstract: Let X be a symmetric space and let $G = Isom(X)$. It is conjectured that if G is a semisimple Lie group and and (Γ_n) is a sequence of arithmetic congruence lattices of G then the sequence of quotients X/Γ_n converges Benjamini-Schramm to X. In the talk I will explain how Borel density theorem for invariant random subgroups can be used to reduce this conjecture to bounds on the part of the geometric side of Selberg trace formula coming form $\mathbb{R}$-regular conjugacy classes. This allows us to prove the conjecture for $SL(2,\mathbb{R})$ and $SL(2,\mathbb{C})$ (based on a joint work with Jean Raimbault).