

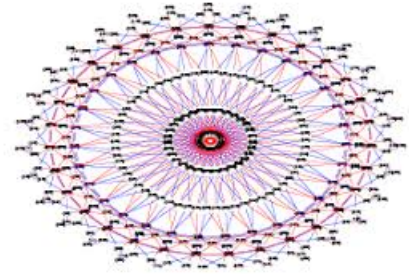
Oberseminar Geometrie

Department of Mathematics

University of Fribourg

Physics 2.52

Wednesday October 14, 2020, 10:20



ALEXANDER KOLPAKOV (UNINE)

Growth rates of Coxeter groups and Perron numbers

We define a large class of abstract Coxeter groups, which we call ∞ -spanned, for which the word growth rate and the geodesic growth rate appear to be Perron numbers. This class contains a fair amount of Coxeter groups acting on hyperbolic spaces, thus corroborating a conjecture by Kellerhals and Perren. We also show that for this class the geodesic growth rate strictly dominates the word growth rate. The main tools in our proof are finite automata for the geodesic and short-lex languages associated with a Coxeter group, geometric representations of Coxeter groups, and the Perron-Frobenius theorem. This is a joint work with Alexey Talambutsa (Higher School of Economics, Moscow, Russia)