Survey on the square and hexagonal model for random groups

Tomasz Odrzygozdzi *

tomeko314@gmail.com

I will introduce the square and hexagonal random group models, which are generalizations of Zuk’s triangular model: we draw relations of length four and six respectively. I will state motivations to consider them and present what is already known, for example in the hexagonal model there is a sharp threshold for Property (T) at 1/3.

*Institute of Mathematics PAN, ul. Śniadeckich 8, 00-656 Warsaw, POLAND