

Doron Puder:

Word measures on symmetric and other groups

Fix a formal word in a free group, such as $xyxy^{-2}$. It induces probability measures on every finite or even compact group by substituting x and y with uniformly random elements from the group.

Studying these word-measures on various families of groups reveals surprisingly deep and elegant mathematics, with connections to various other fields.

In the mini-course I will survey some of the phenomena and structure unveiled in recent years about these measures, demonstrate the variety of mathematics that goes into this theory, mention applications and state conjectures. My main focus will be in word measures on symmetric groups.