Geometry, Groups and Dynamics/GEAR Seminar
(held at the Illinois hub of GEAR)

1:00 pm, Thursday, October 1, 2015, 243 Altgeld Hall
Anush Tserunyan (Illinois)
Probability groups

Abstract: I will introduce a class of groups equipped with an invariant probability measure that respects the group structure in an appropriate sense; call such groups probability groups. This class contains all compact groups and is closed under taking ultraproducts with the induced Loeb measure. I will discuss the use of probability groups as a potential alternative to Furstenberg's correspondence principle. As an example, I will define a notion of mixing for probability groups and mention a double recurrence result for mixing probability groups that generalizes a theorem of Bergelson-Tao proved for ultra quasirandom groups, nevertheless having a considerably shorter proof.
Video