

LOGIC SEMINAR

Guest Speaker: Gabriel Conant
University of Cambridge

Date: Tuesday, May 26, 2020

Time: 11:00 AM

Location: Zoom Location



Lecture Title:

Quantitative structure of stable sets in arbitrary finite groups

Abstract

I will present a new proof of the "stable arithmetic regularity lemma" for arbitrary finite groups. This was originally proved for finite abelian groups by Terry & Wolf using quantitative techniques, which produce efficient bounds. The general statement was proved in joint work with Pillay & Terry using stable group theory and ultraproducts, which led to ineffective bounds. The new proof is based on similar model-theoretic ideas, but is also sufficiently streamlined to allow for a purely finitary argument. In particular, we obtain an effective bound for the general result on stable sets in arbitrary finite groups, and we also improve the bound in the abelian case from exponential to polynomial.