

Department of Mathematics, BGU

Colloquium

On Tuesday, January 2, 2024

At 14:30 – 15:30

In Math 101-

Yotam Hendel (KU Leuven)

will talk about

What can pushforward measures tell us about the geometry and singularities of polynomial maps?

Abstract: Polynomial equations and polynomial maps are central objects in modern mathematics, and understanding their geometry and singularities is of great importance. In this talk, I will pitch the idea that polynomial maps can be studied by investigating analytic properties of regular measures pushed-forward by them (over local and finite fields). Such pushforward measures are amenable to analytic and model-theoretic tools, and the rule of thumb is that singular maps produce pushforward measures with bad analytic behavior. I will discuss some results in this direction, as well as some applications to group theory and representation theory. In particular, I plan to mention some recent results on local integrability of Harish-Chandra characters.

Based on joint projects with R. Cluckers, I. Glazer, J. Gordon and S. Sodin.