

Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On Thursday, May, 7 2026

At 11:10 – 12:00

In 101-

Rishi Kumar (TAU)

will talk about

On the Diffraction Spectrum of the Set of Visible Points in Lattices and Certain Cut-and-Project Sets

Abstract: Let $k \geq 2$ be an integer. In 2000 Baake, Moody, and Pleasants proved that the set of lattice points in \mathbb{Z}^k visible from the origin has pure point diffraction. It is also known that irreducible cut-and-project sets—such as the Ammann-Beenker point set—exhibit pure point diffraction.

Let S be a finite subset of \mathbb{Z}^k , and let $V(S)$ be the set of points simultaneously visible from S . We will discuss the diffraction spectrum of the set $V(S)$ and the diffraction spectrum of the set of visibility from the origin in certain classes of irreducible cut-and-project sets. Joint work with Carlos Ospina.