

Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On Thursday, November 5, 2020

At 11:10 – 12:00

In Online

Arielle Leitner (Weizmann Institute)

will talk about

Deformations of generalized cusps on convex projective manifolds

Abstract: Convex projective manifolds are a generalization of hyperbolic manifolds. Koszul showed that the set of holonomies of convex projective structures on a compact manifold is open in the representation variety. We will describe an extension of this result to convex projective manifolds whose ends are generalized cusps, due to Cooper-Long-Tillmann. Generalized cusps are certain ends of convex projective manifolds. They may contain both hyperbolic and parabolic elements. We will describe their classification (due to Ballas-Cooper-Leitner), and explain how generalized cusps turn out to be deformations of cusps of hyperbolic manifolds. We will also explore the moduli space of generalized cusps, it is a semi-algebraic set of dimension $n^2 - n$, contractible, and may be studied using several different invariants. For the case of three manifolds, the moduli space is homeomorphic to \mathbb{R}^2 times a cone on a solid torus.

Please Note the Unusual Place!