

## Number Theory Seminar

### *The Sato-Tate conjecture and Nagao's conjecture*

Seoyoung Kim (Brown University)

**Abstract:** Nagao's conjecture relates the rank of an elliptic surface to a limit formula arising from a weighted average of fibral Frobenius traces, and it is further generalized for smooth irreducible projective surfaces by M. Hindry and A. Pacheco. We show that the Sato-Tate conjecture based on the random matrix model implies Nagao's conjecture for certain twist families of elliptic curves and hyperelliptic curves.

Friday, April 27 at 12:00 PM in SEO 612