

## Department Colloquium

Speaker: Ilya Vinogradov, Princeton

Date: Monday, January 18

Time: 4:30 p.m.

Place: Jeffery 234

Title: Sequences modulo one: convergence of local statistics

**Abstract:** The study of randomness of fixed objects is an area of active research with many exciting developments in the last few years. We will discuss recent results about sequences in the unit interval specializing to directions in affine lattices,  $\sqrt{n}$  modulo 1, and directions in hyperbolic lattices. Theorems about these sequences address convergence of moments as well as rates of convergence, and their proofs showcase a beautiful interplay between dynamical systems and number theory.