

DREXEL ANALYSIS SEMINAR

October 13, 2023

12-1 PM, Korman 245

**Speaker:** Eilidh McKemmie (Rutgers)

**Title:** Galois groups of random additive polynomials

**Abstract:** The Galois group of an additive polynomial over a finite field is contained in a finite general linear group. We will discuss three different probability distributions on these polynomials, and estimate the probability that a random additive polynomial has a "large" Galois group. Our computations use a trick that gives us characteristic polynomials of elements of the Galois group, so we may use our knowledge of the maximal subgroups of  $GL(n, q)$ . This is joint work with Lior Bary-Soroker and Alexei Entin.