Mathematics, Statistics, and Computer Science **@ UIC**

Number Theory Seminar

Sato-Tate groups of trinomial hyperelliptic curves

Heidi Goodson (Brooklyn College, CUNY, Brooklyn, NY)

Abstract: Let $C_m : y^2 = x^m + c$ be a smooth projective curve defined over $\mathbb{Q}$. We would like to study the limiting distributions of the coefficients of the normalized L-polynomial for C_m. To determine the distributions, we study the Sato-Tate groups of the Jacobians of the curves. In this talk, I will give both general results and explicit examples of Sato-Tate groups for certain curves C_m. I will then use these groups to determine the limiting distributions of the coefficients of the normalized L-polynomial. This is joint work with M. Emory.

The seminar lasts 80 minutes (9:30am-10:50am).

Friday, November 8 at 9:30 AM in 1227 SEO