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

Algebraic Geometry Seminar

Equivariant Degenerations of Plane Curve Orbits

Dennis Tseng (Harvard University)

Abstract: In a series of papers, Aluffi and Faber computed the degree of the GL3 orbit closure of an arbitrary plane curve. We attempt to generalize this to the equivariant setting by studying how these orbits degenerate, yielding a fairly complete picture in the case of plane quartics. As an enumerative consequence, we will see that a general genus 3 curve appears 510720 times as a 2-plane section of a general quartic threefold. We also hope to survey the relevant literature and will only assume the basics of intersection theory. This is joint work with M. Lee and A. Patel.

Monday, March 9 at 4:00 PM in 427 SEO