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

Algebraic Geometry Seminar

Fundamental Groups of F-regular Singularities via F-Signature

Kevin Tucker (UIC)

Abstract: The F-signature is a numerical invariant of singularities which measures the asymptotic number of splittings of iterates of Frobenius. The positivity of the F-signature characterizes F-regular singularities, which are closely related to KLT singularities in characteristic zero. After giving an overview, I will discuss new transformation rules for F-signature under finite maps. These transformation rules allow us to show finiteness of the etale local fundamental group for F-regular singularities, analogous to results of Xu and Greb-Kebekus-Peternell for KLT singularities in characteristic zero. This is joint work with Javier Cravajal-Rojas and Karl Schwede.

Wednesday, August 31 at 4:00 PM in SEO 427