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

Commutative Algebra Seminar

Blowup algebras of determinantal ideals in prime characteristic

Jonathan Montano (New Mexico State University)

Abstract: We study F-purity and strong F-regularity of blowup algebras. Our main focus is on algebras given by symbolic and ordinary powers of different types of determinantal ideals. We also prove that the limit of the normalized regularity of the symbolic powers of these ideals exists and that their projective dimension stabilizes. To obtain these results we develop the notion of F-pure filtrations and symbolic F-purity. This is joint work with Alessandro De Stefani and Luis Núñez-Betancourt.

Thursday, November 4 at 3:00 PM in Zoom