

Algebraic Geometry Seminar

Fundamental groups of F-regular schemes and singularities

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Abstract: In this talk I will start by summarizing recent work on the ℓ -adic fundamental group of F-regular singularities and schemes (joint work with subsets of B. Bhatt, P. Graf, K. Schwede and K. Tucker). After presenting some corollaries and a common limitation of these, I will discuss the necessity of considering a more general fundamental group, namely the Nori's fundamental group-scheme, which is well suited to the study of positive characteristic phenomena. As we will see, it gives a better understanding of the aforementioned corollaries. For example, we will see that the torsion, and not just the prime-to-p torsion, of the Picard group of strongly F-regular singularities is bounded.

Wednesday, March 1 at 4:00 PM in SEO 427