

Speaker: Joseph H. Silverman

Title: Orbits on Tri-Involutive K3 Surfaces

Abstract: Let \mathcal{W} be a surface in $\mathbb{P}^1 \times \mathbb{P}^1 \times \mathbb{P}^1$ given by the vanishing of a $(2,2,2)$ form. The three projections $\mathcal{W} \rightarrow \mathbb{P}^1 \times \mathbb{P}^1$ are double covers that induce three non-commuting involutions on \mathcal{W} . Let G be the group of automorphisms of \mathcal{W} generated by these involutions. We investigate the G -orbit structure of the points of \mathcal{W} . In particular, we study G -orbital components over finite fields and finite G -orbits in characteristic 0. This is joint work with Elena Fuchs, Matthew Litman, and Austin Tran.