

Speaker: Lena Ji

Title: Rationality problems for linear spaces on complete intersections of quadrics

Abstract: There is a deep relationship between hyperelliptic curves and Hilbert schemes of linear spaces on the base loci of pencils of quadrics, dating back to Weil. This has found numerous applications, e.g. to rational points and to moduli theory. In this talk, we study rationality questions for these Hilbert schemes, especially over non-closed fields, using hyperbolic reductions of the pencil. Our main focus is the case of second maximal linear subspaces, and we generalize results of Hassett–Tschinkel, Benoist–Wittenberg, and Hassett–Kollár–Tschinkel. This work is joint with Fumiaki Suzuki.