ODTU-Bilkent Algebraic Geometry

Real representatives of equisingular strata of projective models of K3-surfaces

By

Çisem Güneş Aktaş
(Abdullah Gül)

Abstract: It is a wide open problem what kind of singularities a projective surface or a curve of a given degree can have. In general, this problem seems hopeless. However, in the case of K3-surfaces, the equisingular deformation classification of surfaces with any given polarization becomes a mere computation.

In this talk, we will discuss projective models of K3-surfaces of different polarizations together with the deformation classification problems. Although it is quite common that a real variety may have no real points, very few examples of equisingular deformation classes with this property are known. We will study an algorithm detecting real representatives in equisingular strata of projective models of K3-surfaces. Then, we will apply this algorithm to spatial quartics and find two new examples of real strata without real representatives where the only previously known example of this kind is in the space of plane sextics.

Date: 30 April 2021, Friday
Time: 15:40
Place: Zoom

To request the event link, please send a message to sertoz@bilkent.edu.tr