

Northeastern University



Mathematics Department

Geometry, Physics, and Representation Theory Seminar

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Thursday, April 19, 1:35-2:35 pm, Lake Hall 509

Positivity of the cotangent bundle of a K3 surface

Abstract

In a program set out by Sakai, Kobayashi, Bogomolov and others, one aims to refine the Kodaira classification in terms of positivity of the cotangent sheaf instead of just that of its top exterior power the canonical divisor. In this talk I will discuss joint work with J.C. Ottem in which we study various notions of positivity for the cotangent bundle of a general K3 surface. Our results are applications of classical geometric constructions but also recent results of Bayer-Macri studying the cones of divisors on Hilbert schemes of points.