STABILITY CONDITIONS ON BLOW-UPS AND COUNTEREXAMPLES

Wednesday April 25, at 4 PM, in Cupples I Room 199

Speaker: Cristian Martinez (UCSB)

Abstract: Stability conditions have become an essential tool in the study of the birational geometry of moduli spaces of Gieseker semistable sheaves. However, the conjectural construction of stability conditions on threefolds depends on a generalization of the Bogomolov-Gieseker inequality, which fails in general. In this talk, I will present a new class of counterexamples for the generalized Bogomolov-Gieseker inequality including blow-ups at points and some elliptic fibrations. I will also show how to modify the inequality in the case of blow-ups. This is joint work with Benjamin Schmidt.