

ALGEBRAIC GEOMETRY AND COMMUTATIVE ALGEBRA SEMINAR

Speaker: Gianluca Pacienza
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Date: Thursday, April 1, 2021

Time: 3:00 PM

Location: Zoom

Zoom URL: [notredame.zoom.us/j/97739336655?
pwd=QmUxd3V2Rndyd0VFNlc0RFBxK0xPQT09](https://notredame.zoom.us/j/97739336655?pwd=QmUxd3V2Rndyd0VFNlc0RFBxK0xPQT09)

Lecture Title:

Deformations of rational curves on primitive symplectic varieties and applications

Abstract

I will start by explaining why it is worth studying « singular » holomorphic symplectic varieties and rational curves on them. Then I will talk about a joint work with Ch. Lehn and G. Mongardi in which we study the deformation theory of rational curves on a (possibly singular) primitive symplectic variety and show that if the rational curves cover a divisor, then, as in the smooth case, they deform along their Hodge locus. As applications of our technique, I will present the extension of Markman's deformation invariance of prime exceptional divisors to this singular framework and provide existence results for uniruled ample divisors on primitive symplectic varieties which are locally trivial deformation of any moduli space of sheaves on a projective K3 surface or fibers of the Albanese map of those on an abelian surface.