

ALGEBRAIC GEOMETRY AND COMMUTATIVE ALGEBRA SEMINAR

Speaker: Mahrud Sayrafi
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Date: Thursday, November 30, 2023

Time: 2:30 PM

Location: 127 Hayes-Healy Bldg

Zoom URL: NA

Lecture Title:

Splitting of vector bundles on toric varieties

Abstract

In 1964, Horrocks proved that a vector bundle on a projective space splits as a sum of line bundles if and only if it has no intermediate cohomology. Generalizations of this criterion, under additional hypotheses, have been proven for other toric varieties, for instance by Eisenbud-Erman-Schreyer for products of projective spaces, by Schreyer for Segre-Veronese varieties, and Ottaviani for Grassmannians and quadrics. This talk is about a splitting criterion for arbitrary smooth projective toric varieties.