

ALGEBRAIC GEOMETRY AND COMMUTATIVE ALGEBRA SEMINAR

Speaker: Colleen Robichaux

University of Illinois at Urbana-Champaign



Date: Thursday, April 8, 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:

Castelnuovo-Mumford regularity and Kazhdan-Lusztig varieties

Abstract

We give an explicit formula for the degree of a vexillary Grothendieck polynomial. We apply our work to compute the Castelnuovo-Mumford regularity of certain matrix Schubert varieties. We also derive formulas for the regularity of Kazhdan-Lusztig varieties coming from open patches of Grassmannians as well as the regularity of mixed one-sided ladder determinantal ideals. This is joint work with Jenna Rajchgot and Anna Weigandt.