Department of Mathematics
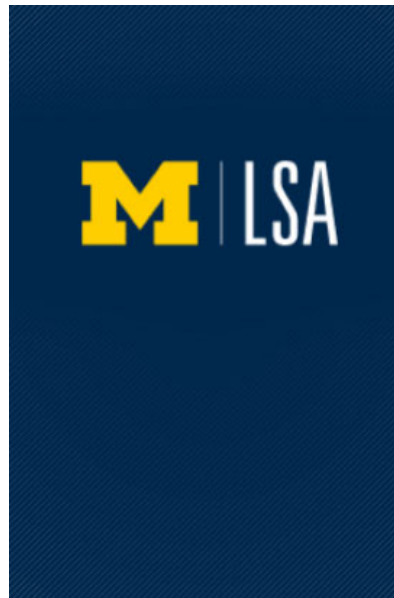## University of Notre Dame

ALGEBRAIC GEOMETRY AND COMMUTATIVE ALGEBRA SEMINAR

Speaker: Teresa Yu
University of Michigan

Date: Thursday, December 7, 2023
Time: 2:30 PM
Location: 127 Hayes-Healy Bldg
Zoom URL: NA

Lecture Title:

Standard monomial theory modulo Frobenius in characteristic two

Abstract

Over a field of characteristic zero, standard monomial theory and determinantal ideals provide an explicit decomposition of polynomial rings into simple GL_n-representations, which have characters given by Schur polynomials. In this talk, we present work towards developing an analogous theory for polynomial rings over a field of characteristic two modulo a Frobenius power of the maximal ideal generated by all variables. In particular, we obtain a filtration by modular GL_n-representations whose characters are given by certain truncated Schur polynomials, thus proving a conjecture by Gao-Raicu-VandeBogert in the characteristic two case. This is joint work with Laura Casabella.

Teresa Yu - University of Michigan