

## Algebraic Geometry Seminar

### *Stable Sheaf Cohomology on Flag Varieties*

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**Abstract:** The Borel-Weil-Bott (BWB) theorem is a fundamental result that gives a (relatively simple) method of computing the cohomology of line bundles on flag varieties over a field of characteristic 0. The analogue of BWB in positive characteristic is a wide-open problem despite many important results over the decades, and it remains out of reach even from a computational perspective. In this talk, I'll speak on joint work with Claudiu Raicu that shows that, despite the chaos, there is a notion of stability for the cohomology of line bundles on flags in arbitrary characteristic. Moreover, there are many cases where we can compute this stable sheaf cohomology explicitly, and these computations yield sharp, characteristic-free vanishing results for finite-length Koszul modules.

Monday, February 5 at 3:00 PM in 636 SEO