

MANY CHEERFUL FACTS

presents

Hessenberg varieties and Young diagrams

a talk by Sarah Iveson

11:10 am - 12:00 on Wednesday, April 26th, in room 1015.

In this talk we will introduce particular subvarieties of the full flag variety over $GL_n(\mathbb{C})$ called Hessenberg varieties. We will discuss the relationship between Hessenberg varieties and certain restricted fillings of Young diagrams. In particular, we will show how one can deduce certain geometric properties of these varieties from the fillings they are related to. No knowledge of algebraic geometry is required.

*I am the very model of a modern Major General,
I've information vegetable, animal, and mineral,
I know the kings of England, and I quote the fights historical
From Marathon to Waterloo, in order categorical;
I'm very well acquainted, too, with matters mathematical,
I understand equations, both the simple and quadratical,
About binomial theorem I'm teeming with a lot o' news,
With many cheerful facts about the square of the hypotenuse!*

- Gilbert & Sullivan $P \circ P$