# Student Research Talks (StReeTs)

**George Mason University**

# Schubert Calculus

**Swan Klein**
**George Mason University**

## Abstract

Schubert Calculus was developed by Hermann Schubert to answer enumerative problems in projective geometry such as "how many lines intersect 4 general lines in 3-dimensional projective space?". In this talk I introduce the main objects of study, Schubert varieties, and develop the cohomological tools needed to discuss the Peterson variety, a particular subvariety of the Flag variety. I then present the results of undergraduate research using a formula introduced by Dr. Goldin and Dr. Gorbutt to compute structure constants for expressing the pullback of Schubert classes corresponding to transpositions as a linear combination of Peterson Schubert classes.

Date: Friday, March 15$th$
Time: 2:30pm–3:20pm
Place: Exploratory Hall 4106

## Pizza will be served at the presentation.

For further information or for special accommodations (including dietary restrictions), please contact Michael Merkle or Gabe Lumpkin via email at `mmerkle@gmu.edu` or `glumpkin@gmu.edu` by Thursday.