Julianna Tymoczko*, Mathematics Department, 14 MacLean Hall, University of Iowa, Iowa City, IA 52245. *Intersecting some special subvarieties of the flag variety.* Preliminary report.

Subvarieties of the flag variety like Springer varieties and their generalizations, Hessenberg varieties, arise naturally in representation theory. We describe natural combinatorial characterizations of the geometry in some special cases, and how it relates to representation theory. (Received February 10, 2009)